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THE TREATMENT OF TUBERCULOSIS APART FROM CLIMATE.

By KARL VON RUCK, M. D.,

ASHEVILLE, N. C.[1]

THE treatment of pulmonary tuberculosis apart from climatic is one of the greatest interest not only to the physicians who are obliged to treat their patients at home and without the advantage of climate, but also to such as practice at climatic resorts, because, although of the greatest importance, climate alone, in its influence upon the disease in question, is not a specific, and the results from it are by no means so uniform and satisfactory that, having resorted to it, we can complacently await the recovery of the patient.

The object of this paper is to consider the remedies, if any, we have apart from climate, and the value they possess, by which we can either cure or at least materially aid the patient's improvement and ultimate recovery ; and, if valuable at all, they are so both at home and at climatic resorts.

In laying my conclusions with such remedies before you, I may say that they are based upon observations of nearly fifteen hundred cases treated by me within the last ten years.

During this time of almost exclusive devotion to the treatment of tubercular patients, I have made careful and extended trial of all the remedies which had the sanction of the profession, and, so far as the safety of the patient justified their employment, also of those, which have of late attracted attention,

I need not mention that the correct appreciation of the value of any remedy in its employment for chronic disease is difficult, and requires for anything amounting to a proof, application in a great number of cases, and, if possible, all under the same conditions. Unfortunately pulmonary tuberculosis in addition to its chronic course is a disease attended by periods of more or less temporary improvement, and again by periods of reverses without any medical interference whatever, making it still more difficult to assign a correct value to remedies employed.

For instance, a patient having a tubercular deposit in his lung has arrived at a period when softening and breaking down must necessarily occur and is impending, if he now consults a physician and receives at his hands any remedy, this patient will soon suffer from increasing cough, fever and in consequence from diminished appetite, loss of flesh and debility, in short he will grow worse for the time being under any treatment, and climate itself, will not be able to entirely avert the destructive process and its accompanying symptoms. When the patient has safely passed through this process of softening, with a cavity formed, the cough and expectoration diminish, the fever subsides, the appetite and nutritive processes again improve,

[1] Read before the Buncomb Co. Medical Society at Asheville, N. C., Jan. 2, 1893.

and, if at this juncture he receive a remedy of no value whatever, he will probably continue to improve for a time.

These phases so commonly observed in pulmonary tuberculosis are frequently believed to stand in relation to proper or improper treatment, or to valuable or indifferent remedies, when, in fact, the treatment or remedies have had nothing to do with it whatever, and it is for this reason that so many remedies have found recommendation as aids or curatives for consumption, and were subsequently discarded when a more extended trial had ended their ephemeral reputation. I have endeavored not to lose sight of these facts, and in addition to my efforts to learn the truth, I have had the opportunity of more constant observation in my institution, and the ability, there to preclude or to recognize influences which affected the course and symptoms of the cases under my care.

In various contributions by myself upon the subject of pulmonary tuberculosis, I have heretofore emphasized as our most important of all means, the proper hygienic management of the patient, which includes environment, diet and such conduct of the patient as shall assure for Nature the best opportunity for increased nutritive processes, and prevent relapses by the avoidance of various indiscretions.

In a paper read at the Third Annual Meeting of the Tri-State Medical Association, Oct. 27th, 1891, and published in the *Dietetic Gazette* of November and December, 1891, entitled "The Cure of Pulmonary Tuberculosis upon the Principles of Nutrition," I have shown, at length, that all the remedies which we possess, climate not excluded, and which have ultimately been shown to have any value at all, are valuable only, because of their direct or indirect influence upon the nutritive processes, and I have stated that every remedy must stand or fall as it is useful or useless to this end, and that their greater or less value must be estimated by this standard.

From my additional observations since, I have had no occasion to change my views in this respect, and I can perhaps show best my conclusions as to the value and uses of our present remedies by describing the use we make of them in the special institution under my charge. All the remedies we there employ, as well as the general management of the cases, can in a large measure be employed and carried out in private practice at least to a degree that in the earlier stages of disease, improvement and cure should follow in a greater number of cases.

Patients upon their arrival at the Winyah Sanitarium are thoroughly instructed of the infectious nature of their expectoration, and much pains is taken to make them understand the importance of its proper disposition, appealing frequently to their selfish natures by showing them the possibility of self-infection should they be in any way careless or delinquent in following the rules given them for prevention.

Believing as I do, that physical and mental over-exertion are the most frequent causes of relapses and necessarily interfere with the nutritive processes by the production of heart-fatigue and its direct and indirect consequences, the patient is directed, "that, while exercise is desirable and beneficial, it must never be carried to a degree of sensible fatigue, neither must it be taken so rapidly that it will induce shortness of breath."

This gives each patient his own limits, and he, himself, becomes the best judge of the exercise beneficial and when it becomes injurious in his particular case.

The next point considered is the presence or absence of fever, to that end, frequent observations of temperature are made, especially for the first few days, and they are also made nights, should a patient complain of restlessness, frequent or increasing cough during the night hours, or of night sweats. If it is found that a patient's temperature at any time during the twenty-fours is elevated two or more degrees, he is ordered to observe absolute rest, beginning with an hour preceding the rise of temperature of the previous day, and continuing until it is reduced to below 100 F. The diet during the fever hours is light, consists chiefly of milk, and the more hearty meals are recommended to be taken when the temperature is normal or nearly so. Unless the fever is very high, this rest treatment is carried out by the patient lying upon a cot upon the piazza, otherwise he goes to

bed, the windows in his room being open to admit plenty of fresh air and sunlight.

These simple measures of rest and diet succeed in the majority of cases in bringing about a gradual amelioration and frequently an entire absence of fever, without which it is not often possible to make any important gain. In cases where these measures are insufficient, we resort to stimulants administered in full doses before the expected rise of temperature, and, these failing also, hydropathic measures are resorted to in addition, and an ice bag is placed over the heart during high fever. Drug anti-pyretics in any form are avoided.

Next in importance is considered the patient's diet, which in the absence of fever or other complications should be mixed, well cooked, nicely served and highly nutritious, avoiding all pastries and articles which in the particular case are found to disagree. The patients receive milk ad libitum, at any time and those who do not eat heartily at the principal meals, consume certainly from three to four glasses of milk or more per day, in the intervals.

The diet of patients having continuous fever is light, consisting of milk, nourishing soups, cooked cereals with cream, broths, oysters, fish, custards, fruit, etc., and is supplemented by rectal alimentation whenever he appears to lose in flesh.

Combined with rest, massage and hydropathic applications, it has been frequently possible to obtain an increase in weight or at least to prevent loss, when temperature maxima of 103 and over were present.

As quickly as the patient's digestive organs permit, solid food is substituted at one or more meals and with the cessation of fever, the patient reaches the general liberal diet.

In gastric and intestinal complications, the diet must of course be regulated in the first place, and the medicinal treatment for such remains the same as it would be, apart from the fact that the patient is a consumptive.

In ectasia and inveterate gastric catarrh, lavage and local medication through the tube is indispensable, in the former, and in cases with deficiency of hydro-chloric acid, local faradization by Einhorn's method is also made use of with the greatest benefit. Creosote is used only for its influence in overcoming fermentative processes in the alimentary canal, when less unpleasant means fail to succeed, and for its stimulating effect upon the mucous surfaces.

I have become absolutely satisfied that creosote has no specific effect upon the tubercular processes and have demonstrated, that inoculation with tubercle bacilli of blood serum from a patient absolutely saturated with creosote by large and long continued dosage, show luxuriant growths of the germ, not differing from culture in serum from sources where creosote had not been given—also that the germs from such patient's sputum produce virulent cultures.

Patients, who can take it easily and assimilate it, especially those in whom increase in weight is desired, and is not otherwise readily obtained, are given cod-liver oil either in emulsion or clear, as they prefer.

For its general tonic effect, as a stimulant to the circulation and for the prevention of taking cold, by accustoming the skin to changes of temperature, I employ regularly for all patients the so-called "cold rub."

This is applied before the patient gets out of bed in the morning, and consists in the rapid application of cold water followed by brisk friction, a small surface of the body being so treated at a time while the rest remains covered with a woolen blanket.

The temperature of the water is first 100 F. and is steadily decreased until after three or four weeks a temperature of 60 or even less is reached.

In cases where the cold water treatment and other management are insufficient and there is still feeble heart action, or the heart continues to be easily excited by slight exertion, I make use of strychnia in full doses, and I prefer it the more, when from want of sufficient motility the digestive process is unusually slow. Small doses are of little use, and the remedy gives us the best results when pushed a little short of the degree where its physiological effects become distinctly manifest. It becomes then a good expectorant, has a favorable effect upon night sweats, prevents constipation and increases the appetite.

Cough mixtures are never used, and seldom is there any occasion to interfere on account of cough.

When accompanied by expectoration the cough is useful; otherwise, if the general management is correct, the patient seldom is annoyed by dry or unavailing cough; if the latter is still present, an examination of the pharynx and larynx usually shows conditions there, which account for it either by enlarged glands at the base of the tongue, catarrhal pharyngitis or laryngitis, or tubercular disease for which proper local treatment is then employed. In the few cases where cough needs to be interfered with moist inhalations give as a rule, relief, otherwise I prefer the use of codeine in small doses.

The local or circumscribed pleurisies which occur in the course of tuberculosis of the lung are treated by rest and counter-irritation, cough is then controlled by codeine.

Pleurisy with effusion is treated upon general medical and surgical principles, but early evacuation of serous fluid is avoided, having found that in most cases, it is reabsorbed without surgical interference before any damage to the lung can result.

Tubercular disease of the intestines occurs as a rule only as a late complication in cases otherwise far advanced, which we do not admit to our institution. In such, however, as have come under my care, I admit freely that I have seen little benefit from the remedies employed. When the stomach digestion is still good, a raw beef diet together with salicylate of bismuth and small doses of opium internally have been found beneficial. In a few cases the diarrhœa entirely subsided.

Urine analysis should be made in all cases, and especially in such where the disease has advanced to destructive changes in the lungs. It will be found that amyloid kidney is a much more frequent complication in advanced cases than is mentioned by text books, and these cases are ultimately hopeless.

Bloody expectoration, that is mucopus with an admixture of blood, is treated by rest, if the cough is troublesome codeia in small doses is given.

Expectoration of clear blood or decided hemorrhage has occurred so rarely that I have little experience to offer from the usual well known treatment.

In all my cases which have been treated in the institution, hemorrhages occurred in less than one per cent., and, with one or two exceptions, were clearly referable to the patient's own fault. In private practice I have observed hemorrhages with the usual frequency, until I learned to appreciate the detrimental effects of over exertion, since which time I see much less of it. One other potent but less frequent factor favoring the occurrence of hemorrhage is a very rapid gain in the general condition of patients who make blood very rapidly.

I have observed several such cases where, after excavation, the general improvement was almost astonishing, the patient, particularly in one case, presenting a florid appearance. Hemorrhage from the cavity occurred without any other apparent cause than the condition of an over-filled vascular system favoring rupture of a vessel traversing the cavity.

In the treatment of hemorrhage, I have always endeavored to distinguish between the forms which occur with destructive processes and that form which is the result of over-exertion, only. The former is the more obstinate and yields best to applications of ice bags over the heart and over the seat of the destructive change. In addition, I of course, take such other measures as the particular circumstances in the case may indicate; rest, ice, light diet, ergot, morphia, strychnia and inhalations of astringents being considered most useful.

In referring to more specific methods of treatment, I have already stated that, in my experience, creosote has not justified me in considering it as having any direct influence upon the tubercular process.

Koch's Tuberculin and Tuberculocidin prepared by Prof. Klebs I have used extensively, having made more than six thousand injections of these remedies within the past two years. As to Koch's original tuberculin, I still believe, that by the careful method which I suggested in its administration, and which, to my knowledge, has not been carried out by any of the experimentors in this country with the precautions I have learned to be essential, the remedy is a valuable one for

properly selected cases. After its first few weeks use, I have not observed the least unfavorable influence attributable even remotely to the remedy nor the slightest discomfort to the patient beyond the puncture with the hypodermic needle. On the other hand my patients all improved, quite a number arrived at conditions amounting to a cure, or at least, permanent arrestment of the local process with subsidence of all symptoms, and in many more, improvement of a less degree is still maintained. Owing, however, to the adverse judgment of many of the profession, and, on the whole, to a well marked prejudice on the part of patients, I have been obliged to relinquish its more general use, if I hope for further patronage to my institution, and I have for more than a year past, not given it unless by the request of the patient, and the consent of the physician who recommended the patient to me, and, of course, only then, when I found the case otherwise suitable to the treatment.

It has recently been urged that my results are not attributable to the tuberculin, but to the strict management and other care which the patients had in the institution, located as it is, in a favorable climate.

Be that as it may, I have the satisfaction, that I have not been obliged to witness the disasters related by other experimentors, while I still hold to my impression that the remedy has been an important aid.

One naturally believes his own senses, these have shown me visible tubercular infiltrations and ulcerations in the mouth, pharynx and larynx to improve rapidly, and, in many cases, I have seen tubercular ulcers to heal and cicatrize in which no progress had been made under the usual local treatment, and while I am unable to say what the result would have been had no tuberculin been given, I cannot divest myself of the impression, that the improvement of many pulmonary, and laryngeal cases has been unusually rapid and satisfactory.

With Klebs' tuberculocidin I have never been able to produce either local or general effects. I have used it upon twenty-two patients. Daily doses of 5000 milligrams had no more influence upon the patient's general condition, than so much water. It was remarkable, however, that in a number of the cases, the cough became modified for the better, the expectoration changed in its character and finally diminished in quantity, the tubercle bacilli diminished in numbers, showed degeneration forms, and in several cases entirely disappeared for the time being.

Subsequently they became again manifest, and disappeared again upon a second course of the remedy. The same return was witnessed a third time, except in one case, who has had no expectoration since his second course and is practically recovered.

Although the behavior and disappearance of the tubercle bacilli was remarkable, and seemed to stand in relation to the treatment with tuberculocidin, I discontinued its use, nevertheless, first, on account of the great cost of the large doses required, and also because the general improvement of the patient was not strikingly greater, in fact, in most cases not as satisfactory as I have witnessed under Koch's original remedy.

The latter, according to my observations, when given as I have recommended, produces a gentle, stimulating effect upon the tubercular lesions. Under such use more blood reaches the part, the local nutrition is thereby augmented and the formation of connective tissue in and surrounding the tubercular deposit is favored. This stimulating effect was not apparent under the use of tuberculocidin, and visible tubercular lesions were not influenced in their course and showed no local reaction to the remedy. Large and injudicious doses of Koch's tuberculin lead to well marked congestion and are frequently followed by inflammatory changes, softening and destructive processes, and thus become a source of evil instead of benefit.

I still hope that by some improvement in its manufacture, or modification, such as Hunter's or Kleb's, the remedy will be made so safe that its administration will require less care and circumspection than I have found necessary, while it may remain equally effective.

In my experience, no drug remedies have been of direct value in the treatment of pulmonary tuberculosis. Such as I have been obliged to use more

recently and am still using, were given not because the patient suffered from tuberculosis but because, in the course of the disease certain symptoms could, for the time being, be modified and controlled favorable, the faulty nutrition could thereby be improved or because there were other conditions apart from the tubercular disease which required medicinal treatment. We thus resort to the Pneumatic Cabinet if, in the absence of contra-indications, we desire a better ventilation in the lung, and to overcome passive congestion. Under its proper use, the pulmonary circulation becomes better, the vital capacity is increased and the patient's general nutrition is benefited. We also resort to the inhalation of oxygen and more recently of ozone; and exhibit ferruginous preparations under certain conditions of anemia which do not yield to judicious diet and out-of-door life.

The latter carried out painstakingly, and best in a favorable climate, combined with strict and correct management which takes cognizance of the minutest details in the patient's life by which everything is turned to the patient's advantage and all harmful influences are guarded against, these with a carefully regulated diet the judicious use of hydropathic applications and with sufficient time given, are the great essentials to improvement and cure.

THE WINYAH SANITARIUM, ASHEVILLE, N. C.

NUTRITION IN TUBERCULOSIS.

BY WILLIAM F. WAUGH, M. D.

WHATEVER may be the final results of the experimentation now going on, no distinctly germicidal remedy has as yet succeeded so positively as to command the general support of the medical profession as a body. Thus far, the only practical result of the discovery of the tubercle bacillus, as regards therapy, is to reaffirm the conclusions already reached by the clinical experiences of ages, that the strongest defense against tuberculosis lies in improving the nutrition. We now say, we seek to render the body immune by increasing its power of resisting the attack of the bacillus; just as our fathers spoke of aiding the *vis medicatrix naturae*. Then, as now, it was recognized that there is a certain predisposition to tuberculosis, that while all mankind is exposed to the danger of contracting this disease, certain individuals are much more apt to become affected than others. That elusive principle, the vital force, has been quoted learnedly rather than tangibly, but in this materialistic age we cannot go farther than the nutrition. We may say that the specific liability to tuberculosis lies in innutrition; and that by improving the nutrition we lessen this liability; while in those who have not by inheritance or by constitution any predisposition to tuberculosis, such predisposition may, and will, be acquired, if conditions arise that throw the individual into a condition of innutrition. Moreover, we can go farther, and say, that should iodoform, aristol, guaiacol, or any other substance, finally win a place as an agent of real efficacy as a *tuberculocide*, the principal *role* as prophylactic and adjuvant will still remain to the nutrition improvers. At present I wish to speak of the digestive system and its needs in tuberculosis.

It is a matter of common observation that even in the pre-tubercular state we have weakness of all the digestive organs, and a total inability to digest certain foods or even entire classes of foods. The person with phthisical tendencies has little appetite, is delicate and particular in regard to food, is unable to digest coarse foods, or any fat, except butter, and eats but little of that. The substitutes for food, tea, coffee, tobacco and alcohol, are favored by him. Milk constipates, eggs make him bilious, fat meat he cannot swallow, and of the few articles that agree with him, he soon tires, from their frequent repetition. Nevertheless, he is not enterprising, and looks with dislike on the prospect of tasting any new or unaccustomed dish. Here is where I make my first point: This state of affairs is largely due to habit; and is to be overcome, as any other bad habit would be, by persistent effort. My first rule is that the patient shall eat a morsel of every article that appears upon his table; that he shall especially eat of the foods he dislikes, and that disagree with him. And yet every doctor and every book re-

peats the stereotyped rule "avoid foods that disagree." Why? Will the boy ever learn to swim who never goes into the water? Will the stomach ever learn to digest unless it tries? Why do oysters, shaddocks, garlic, avogado pears, tobacco, beer, become palatable? No one likes these things at first, but as the palate becomes *accustomed* to them, they are relished more and more. The dislike of a food is due to two causes:—the palate has not become accustomed to it, or the digestive organs are unable to manage it. We dislike things we cannot digest, and unconsciously select such articles as are most readily digested by us. It has been said, I think it was by Gross, that no one recovers robust health on a limited diet. I will go farther and say that a limited diet is responsible for a vast proportion of the ill-health prevalent. The needs of the human body are wonderfully complex. Take the articles that make up an ordinary dinner, and inquire where they were produced, and you may be surprised to find how many parts of the globe have been ransacked to bring together the materials for a single meal. This is not accidental. It means that the modern man requires the most complex variety of food principles to sustain, in perfect order, his wonderful mechanism.

Any child may, in a few months' time, be taught to digest every variety of food that is obtainable, by the simple method of instructing him to eat a little morsel of every article presented. It is not well to give more than a morsel, as the ability to digest must be developed, and the first step is the cultivation of the taste. As the palate becomes accustomed to the new food, the ability to digest it increases. A great benefit accruing from this instruction is that the child, or invalid, is thereby debarred from making his meal off one article—a custom well calculated for the reduction of fat or plethora, but not conducive to the health or the morals of children. The greed displayed by a child who would devour the whole contents of the dish he liked best, is not salutary to mind or body.

But invalids cannot be expected to begin off-hand, eating all sorts of food, things they cannot digest and things that disagree with them, without any preparation or assistance. In all cases, the quantity of food to be taken at each meal must be prescribed, and the new foods must be accompanied by artificial digestants, until the patient has learned to digest them himself. The albuminoids are nearly always the foods most easily digested; the starches and fats offer the greatest resistance. Hence. the digestants most generally useful are pancreatic extract, and diastase. No preparations of these agents with which I am acquainted excel, if any equal, in efficiency and palatability those of the Maltine Company. The maltine with pancreatin should be given in full doses, at the beginning of each meal, in all cases of tubercular predisposition, in which the training system herein advocated is put in effect. The dose may be given in milk, water, beer or porter, but is best given in gruel or by spreading on a thin slice of buttered bread, and this covered by another. This ensures the taking of starch and fat at the same time as the agent that digests these foods. Otherwise, half an hour may intervene between the food and its digestant; when it is somewhat doubtful if any good is obtained from the latter. In all stages of phthisis, maltine is indicated, and the various compounds may be varied to suit the case. If the albuminoids are not digested, the maltine with peptones is to be preferred. Of this preparation, Prof. Graeme M. Hammond writes as follows:[1]

"The digestive organs of many people who suffer from neurasthenia refuse to perform their functions properly. As in epilepsy, the digestive juices are not secreted in anything like their proper proportions. This, of course, results in indigestion for all classes of foods, usually more for some than for others. In such cases I have found maltine with peptones very serviceable. The maltine promotes the digestibility of the starchy foods, while the peptones permit the daily quantity of nitrogenous food to be diminished without depriving the body of its nutrition.

"From my experience with maltine with peptones, I have come to regard it as a most valuable remedy in the treat-

[1]N. Y. Med. Journal.

ment of disorders of digestion, and for imperfect nutrition."

Dr. Bloch, of the Montefiore Home for Chronic Invalids, says: "In cases of advanced phthisis, maltine with peptones was well borne by the stomach, vomiting ceased soon, and the patients became much stronger, nutrition being restored. In one case of phthisis where the œdema had extended over the whole body and face, together with marked ascites, the swelling disappeared gradually after maltine with peptones was given, while the stimulants alone had been without avail, the œdematous stomach not being able to absorb a sufficient quantity."

Even in the advanced stages of phthisis when it is exceedingly difficult to nourish the patient, and forced feeding is resorted to, the maltine with peptones will be taken with some relish and no nausea. For gavage, pre-digested milk, maltine with peptones, Bovinine, Mosquera's powdered beef, Carnrick's foods, raw eggs, with a liberal allowance of pepsin, may be employed in succession. The feeding should not be repeated more than three times daily, and may be supplemented by one daily injection of the same foods into the rectum.

The stomach will take the acid meats after all other other food has become distasteful. Pickled tripe, soused pigs' feet, pickled lambs' tongues, raw oysters with vinegar, are relished up to the latest periods. To all these foods, pepsin should be added in full doses.

The administration of the digestants in the pre-tubercular and early tubercular conditions is not a simple palliative. Under their use the stomach begins to digest for itself. This is partly due to the fact that as the blood is enriched by the absorption of the products of digestion, the peptic glands have better material upon which to work, and therefore produce a better supply of pepsin. But very often when the stomach is unable to start the process of digestion, it will keep that process going if it is once begun. Hence, what is needed, is *the start;* and if we give enough pepsin to digest an ounce of food, we will find that several ounces will be digested, even in a stomach that without the pepsin could digest none.

IS TUBERCULOSIS A CONTAGIOUS DISEASE, AND SHOULD SEGREGATION BE PRACTICED?

By LAWRENCE F. FLICK, M. D.

TUBERCULOSIS is a contagious disease. Has the theory implied in this proposition sufficient evidence in its support to justify the medical profession in accepting it as a doctrine? To my mind it has, and if it has not, then there is no disease which ought to be accepted as contagious, for none has been demonstrated to be so. We have, in support of the contagious theory of tuberculosis, experimental and clinical evidence, either of which is in itself conclusive; and when the two are considered together they ought to convince the most skeptical mind.

The experimental evidence begins with the work of Kortum, in 1789, and ends with the complete demonstration of Koch. There is nothing wanting in this evidence. It is as complete and as convincing as anything human can be. If reason rejects it, it must also reject the simplest problem in mathematics. Those who have not studied this evidence have no right to speak on the subject, and those who have studied it and see a flaw in it, owe it as a duty to science and humanity to pick the flaw and hold it up before the civilized world. For such a person there is great renown in store.

The clinical evidence in support of the theory, while from the nature of things, less precise, is as pregnant with truth as the experimental. The chain of clinical facts which point to the conclusion that tuberculosis is contagious is so complete and strong as to leave no room for doubt. The entire chain of facts must, however, be contemplated as a whole and not in links.

In the first place, history offers strong evidence in support of the contagious theory. In those parts of the world which have been opened up to civilization recently enough to bring them clearly within the compass of historical vision—we are able to trace the introduction and progress of the disease. America was free from it prior to the entrance of the white man.[1] That portion of the

[1]Treatise upon the Cause and Cure of Pulmonary Consumption. Rush. Vol. II, pp. 37.

country which was settled by the English, with whom the disease was very prevalent and who took no precaution against spreading it, became rapidly infected and soon became as much afflicted as England itself;[1] while that portion which was settled by Spaniards, who believed the disease to be contagious and practiced preventive measures, remained free from it until visited by other people who did not hold such beliefs and practice such measures.[2] The Papago Indians, who have kept aloof from all other than Spanish influences until recently, have, until recently, kept entirely free from the disease.[3]

History further shows that where preventive measures have been introduced the disease has diminished.[4] Prior to 1782, tuberculosis was so prevalent in southern Italy, or what then constituted the Kingdom of Naples, that it became a source of alarm at home and a subject of comment abroad. The Neapolitans were driven to the conclusion that the disease is contagious by its great prevalency and malignancy. They accepted the conclusion and inaugurated a crusade against the disease by passing stringent laws for the purpose of isolating consumptives and disinfecting quarters occupied by them. These laws remained in operation long enough to stamp practices upon the people which remained with them as national customs. The result of the practices begotten by those laws has been the almost complete extermination of the disease in that part of Italy. From a mortality rate of at least ten per 1000 living people, there has been a reduction to a little above one per 1000 living people.[4] England, prior to 1839, had a mortality rate from tuberculosis of over three per 1000 living people. About that time, prompted by humane motives alone, the English began to institute consumption hospitals. These hospitals became popular and rapidly grew in number and capacity. In direct ratio with their isolating capacity tuberculosis decreased in England, and now, after forty-three years of persistent isolation, the disease has decreased fifty per cent.[5] At the same rate of decrease tuberculosis will become extinct in England in forty years more.

Tuberculosis observes all clinical laws which acceptedly contagious disease observes.

1st. It is never contracted except upon exposure to another case. No one has yet shown an authentic case of tuberculosis which was contracted without such exposure, and has demonstrated that it was so contracted. The truth of this proposition is further borne testimony to by the frequent occurrence of the severest forms of inflammation of the lungs without termination in tuberculosis.

2nd. It occurs most frequently where exposure is the greatest and most prolonged. The vast majority of all cases of tuberculosis are contracted either by having intimate social relations with persons suffering from the disease or by living in infected houses. The very frequent occurrence of the disease in those who have intimate social relations with persons suffering from it has given rise to the erroneous and very misleading theory of heredity. The great part which infected houses play in the spread of the disease has been demonstrated in my paper on the contagiousness of phthisis, in which I tabulated all deaths from the disease in the Fifth Ward of the city of Philadelphia, during a period of twenty-five years, and more recently in the papers of Dr. Chapin, of Springfield, Mass., and Dr. De Forrest, of New Haven, Conn., in which they tabulated the deaths from the disease in each of those towns for long periods. Much interesting evidence in support of both of these methods of contracting the disease is furnished by Dr. Cornet's elaborate investigations.

3rd. Tuberculosis like other contagious disease is subject to the laws of

[1] Contagiousness of Phthisis. Flick. Transactions Medical Society of the State of Pennsylvania, 1888.

[2] Supra Cit.

[3] Does Pulmonary Consumption Tend to Exterminate the Indians? By Thos. G. Mays, M. D.

[4] The Prevention of Tuberculosis. A Century's Experience in Italy. Flick. Transactions of the American Public Health Association. Vol. XVI.

[5] Special Hospitals for Treatment of Tuberculosis. Flick. TIMES AND REGISTER, Philadelphia, March, 1890, or, Transactions of College of Physicians, Philadelphia, 1892.

acclimatization, although in but a limited degree. Persons who have been exposed to the disease for a long time before taking it, take it in a milder form than those who contract it upon first exposure. This I have frequently seen in families in which nearly the entire family took the disease one after another. It is also illustrated in the history of the disease in countries or in large cities.[1]

The objections which have been raised against the theory of contagion have all been ably answered at one time or another. It may be well, however, to notice a few of them here.

It is frequently said that if tuberculosis were a contagious disease every person ought to die of it, since every person is exposed, and because every person does not die of it, it cannot be contagious. This argument is of course based upon misconception. In the first place the laws of resistance and acclimatization are capable of preventing the extermination of the human family by any disease. In the next place the nature of tuberculosis and the laws governing its contagion tend to restrict it. Tuberculosis can only be conveyed through pus given off from a tubercular ulcer, be that in the lungs or in any other part of the body. The pus has to find its way into the system of the new victim before he can contract the disease. Now the natural obstructions which nature places in the way of the pus getting into the system of a healthy person are so many and great that it ordinarily requires prolonged exposure to contract the disease. The popular notion that the air of a city is swarming with tubercle bacilli, and that every where one goes he must inhale them is erroneous. Tubercle bacilli cannot live in air unprotected by a foreign body, such as pus, decomposed vegetable or animal matter or some such substance; they are, therefore, necessarily confined to certain environments. The inhalation of the breath of a consumptive is entirely innocuous, and unless one is so situated in life as to be compelled to inhale dried tubercular pus or to contaminate his food with tubercular pus he is in no danger of contracting the disease.

The freedom from tuberculosis of those officially connected with consumptive hospitals was formerly quoted as an argument against the contagiousness of the disease, but since Dr. Williams, of the Brompton Hospital, and Dr. Cornet, of Germany, have shown that no such immunity exists the argument falls to the ground. Dr. Williams, in a paper which appears in the *British Medical Journal* of September, 1882, records twenty-one positive cases of phthisis and five doubtful ones which had up to that time occurred among persons who had been connected in one sphere or another with the Hospital. Dr. Cornet, in a very able paper, has shown that the mortality rate among nurses from tuberculosis is nearly three times as high as it is among people at large.

As to the question of segregation, in my opinion, it is unnecessary in the majority of cases. Compulsory segregation would, I think, be unjustifiable under any circumstances. The contagion of tuberculosis is confined to tubercular pus and this pus can easily be destroyed before it has the opportunity of infecting anyone else. With people who are sufficiently intelligent and who have the means, all necessary preventive measures can therefore be practiced at home. For the ignorant and for the very poor hospital accomodations ought to be provided. Such hospitals, if properly conducted, would offer sufficient chance of recovery to make it an inducement to go to them, and the poor would enter them voluntarily.

Some provision ought, however, to be made for the support of persons suffering from tuberculosis who are compelled by necessity to earn their own living, or that of persons depending upon them. No one suffering from tuberculosis should be permitted to engage in any occupation in which he handles either the food or clothing of others, or in which he may be thrown in very close relationship with the healthy. Persons who have earned their living at such occupations during health ought to be pensioned by the Government while suffering from the disease and be compelled to abstain from their occupation. Inasmuch as they make a sacrifice for the public good they ought to be supported by the public.

736 PINE STREET, PHILADELPHIA.

[1] Contagiousness of Phthisis, Flick, Trans. of Med. Society of the State of Penna. 1888.

HEALTH RESORTS

By WALTER DAVIDSON BIDWELL, M. D.

CALIFORNIA.

THE man who would attempt to write an article upon the climate of California, other than as W. A. Edwards has, concerning Southern California in the Climatologist, the article being quoted in the special number on "Resorts," would lay out for himself a task requiring more time than the little exploits of Hercules. Having lived in Massachusetts, Connecticut, Kansas and the District of Columbia, and visited for lengthy periods in South Carolina, Michigan and Colorado, New and Old Mexico, and being finally located in California, I have sampled a variety of climates, and though I am not a professional student of climatology, can at least claim a place among the amateurs. As an amateur, therefore, I believe there is no perfect climate for consumptives as a class nor even for an individual case. Every place in the world has material drawbacks and most places in the United States have two or three, perhaps more, features that are objectionable. Now, if every one, layman or physician, who feels called upon to, or will consent to write up the climatic conditions of any locality, will first jot down on scribbling paper the *defects* which he knows are present during one or more months in each year and which are inimical to the recovery of consumptive patients, and then write his laudatory article, being as conscientious as his temperament permits and incorporating in their proper places the defects alluded to, we will soon have a collection of material from which can be compiled a book on "Resorts" worth its weight in gold. There is nothing gained and much harm done by wholesale and unstinted praise of the climate of various localities, when not corrected by this statement of all the facts which justice demands.

It is not many months since a gentleman made a tour through California and the Southwest, investigating various places as resorts for consumptives, more particularly for winter, and in his report every place visited appeared more or less desirable, but all had so much favorable comment that a patient from the East would have felt justified in going to any. If an arbitrary division into classes is made of cases of this disease in the incipient and advanced stages; those able to walk and those able to ride; those with slight and those with excessive expectoration and cough, and the relation pointed out between these classes and the climate of various localities, such reports will be of practical use to many a poor sufferer who thinks life is not worth living.

To return to California, I must confess that I have not been here long enough to report concerning even a single locality. I say *locality* advisedly, for there is no climate of the State, or even of a large portion of the State. In other portions of the United States this is different, for instance, the district for miles about Aiken has very similar climatic conditions to those which prevail in the town, whereas California has a different climate for each limited locality. For example, there is a northern and a southern citrus belt; indeed, though it is not so much talked of, the northern belt has produced the finer oranges, and this of course implies a certain well known mildness which does not exist in the interval between the two regions. San Rafael is less than twenty miles from San Francisco, and yet the temperature is several degrees higher, the rainfall several inches less, high winds practically unknown and fogs rare, whereas, during the Summer season it is the exception in San Francisco to be without fog for twenty-four hours, sometimes the sun is not seen for a week at a time, and the high winds come as regularly as the afternoon. Many cases of consumption develop in San Francisco, whereas, aside from dust and lack of occupation, San Rafael is a delightful resort for patients with the disease. Oakland, seven miles from San Francisco, has a milder Summer climate than the latter, Summer being the trying season in this State, while in Winter it is several degrees colder. The majority of consumptives are not able financially to live in one place in Winter and another in Summer, so in speaking of the advantages of a place, that one is to be considered infinitely preferable where the climatic conditions are not specially inimical to the patient's well-being at any season of the year, and where he or she can, by

his or her customary employment contribute to the support of self and any dependents.

Indeed there should be many special numbers on this one topic, and I hope to see more articles where every detail, not merely of atmospheric condition, but of equally important mental, moral, and financial surrounding and possibility, will be given, and the unfortunate patient, guided by his physician, be able to select that place where his physical being will be most benefited, because other factors than climate are not neglected.

When patients are sent from the East to California, grave errors are often made through a lack of knowledge of the exact climatic conditions of the different seasons. Winter is, generally speaking, a delightful season in the central and southern portions of the State. But the relative desirability of different localities, even in the same season, is hinted at in the weather report for the year of '91, which shows one place with three hundred and three cloudless days, and only eleven rainy days, the total annual precipitation being but 2.67 inches, while another, in the northern portion of the State, had only eighty-four cloudless days, one hundred and fifty-three rainy days, and the total precipitation was 45.80 inches.

Between these two extremes can be found any variety of climate desired. Another feature to be considered is that some cases are benefited by vicinity to the coast, where the soil is so dry and sandy that the atmosphere more closely simulates that out at sea than on the Atlantic coast. Some cases do well in mild latitudes like that of Los Angeles, while others are benefited by the less enervating climates farther North, where, also, there is less danger from the assembled consumptives, who are already located at Los Angeles.

Having thus intimated a a few of the difficulties in the way of an adequate description of California climate, I hope, at no distant day, to present some collections of facts concerning individual places that may assist physicians in the East in locating those of their patients who desire to come to this State which undoubtedly contains many of the best places in the world for permanent or temporary residence for invalids.

THE MACDONOUGH, OAKLAND, CAL.

Annotations.

Dr. E. F. Brush has paid special attention to the subject of tuberculosis as it appears in cattle, and the danger of milk from tuberculous cows. He states that this disease is much more common in cattle than is generally believed. As the temperature is not sensibly raised, the cow lives a long time, in apparently good health. The milk is not necessarily or at all times contaminatined with tubercle bacilli but there is not at any time a certainty that it is not so contaminated. Consequently the child fed on such milk is in about the same danger as an infant that suckles from a syphilitic wet-nurse:—infection may or may not occur. The risk, such as it is, should be clearly understood, and those who choose to take their chances may do so knowingly. It is to be hoped that these investigations may lead to a reform in the care of milch cattle ; whose accommodations are often of the most unsanitary description. As in the human subject, cleanliness, good ventilation, good food and good hygiene generally, are the best preventives of bovine tuberculosis. In the meantime those who buy their milk should see that it is well boiled.

In the June *Climatologist*, a journal whose early demise is to be regretted, Dr. Thomas Darlington discusses the effects of Arizona's peculiar climate on the bodily functions. The changes in the temperature are great and sudden. The loss of fluid from the body is very great ; the skin and mucosa becoming very dry, so that in sleep the membranes become fissured ; their mucus becomes inspissated, plugging the follicles ; and follicular pharyngitis, tonsillitis and chronic rhinitis are very prevalent. Aphonia results from the dryness of the vocal chords. Ostitis and deafness are common. Elimination by the liver is decreased, the urine is

scanty and generally heavy (s. g. 1028); irritating the urinary tract. Constipation results also; and with the water ptomaines are reabsorbed from the bowels. The loss of weight is constant; the average being thirteen pounds. This loss occurs in the first three months of residence.

News.

Messrs. W. H. Schieffelin & Co. prepare pills of guaiacol carbonate, containing three grains each. This preparation is free from odor and taste, unirritating, and uniform in composition, yet fully as effectual as guaiacol itself.

Bouillot read before the French Academy of Medicine a paper, of which the following is an abstract:

The remarkable studies of MM. Gautier and Mourgues on the alkaloids of cod-liver oil, show us definitely the nature of the principles to which are due to a very great extent, its medicinal properties.

The physiological experiments made by these authorities on animals prove that the alkaloids referred to act:

1st. As stimulants of nutrition and of the circulation.

2nd. As diuretics.

In the presence of such remarkable results, explaining the therapeutic action of the oil, I have thought it possible to utilize in medicine the alkaloids themselves; besides it appeared to me interesting to inquire if the effects observed by MM. Gautier and Mourgues, in their experimentation on animals and especially its action as a stimulant to the appetite and diuresis, were noticeable when exhibited in a human being.

Guided by this idea, I prepared some of these same alkaloids, but in the present case I have not attempted to isolate them, and I have administered therefore the whole of the active principles of cod-liver oil as a medicinal unit.*

The dose administered by the mouth to normal subjects in twenty-four hours, varied from fifteen to twenty-five centigrammes.

The analysis of the urine made before and after the administration of these alkaloids showed that:

1st. The volume of urine voided during the twenty-four hours, as well as the amount of urea was considerably increased.

2nd. That it acted as a powerful stimulant to the intra organic oxidization, a fact already formulated in the conclusions of the original work.

From a clinical point of view the following are some of the results obtained on treating a number of patients with the active principles of cod-liver oil:

1st. Five young women with vague pains, loss of appetite, progressive decrease of strength, neurasthenia: The effects in the first place were increase of appetite, return of strength, with loss of the painful symptoms referred to. Three of them who had not menstruated for a considerable period were relieved of the suppression in a short time after beginning the treatment.

2nd. In the case of two children who were suffering from malnutrition, the appetite promptly returned in a few days.

3rd. Three patients who were afflicted with severe eczematous eruptions at each menstrual period, were cured of this trouble.

4th. In two cases of bronchial catarrh in old patients, the alkaloids produced the well-known effect of cod-liver oil, and were administered with advantage and perfectly tolerated.

These observations show that the active principles of cod-liver oil are of undoubted value as therapeutic aids where the oil is indicated.

An abstract of Klebs' report on tuberculocidin has been prepared, but has been crowded out of the present number. It, as well as other material on the subject of tuberculosis, will appear in our next number. In fact, it is to be expected that each of our special numbers will be followed by a supplementary issue the following week, mainly devoted to the same subject.

*M. Chapoteaut, in 1885, was the first to demonstrate that apart from the oil considered as an assimilable fat, there existed, in variable proportions, a number of alkaloids, etc., and these he removed from cod-liver oil in the form of Morrhuol, representing all its active principles.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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CHURCHILL'S THEORY.

WHEN Churchill wrote, the bacillus had not yet been recognized; and since his time nearly half a century of investigation, myriads of new facts, and a revolution in pathological principles, have altered the foundations on which we to-day upbuild the edifice of our art and science. Yet, when we peruse the following epitome of his theory, and substitute the new nomenclature (for we are continually clothing old ideas in new terms,) how little is there to change! Add the bacillus as an exciting cause, and we have still to-day to account for the individual diversity of liability by an unknown physiological condition, concerning which Churchill's theory offers as good an explanation as any other as yet promulgated. Suppose the phagocytic theory be accepted; we have still the indomitable WHY, rising to confront us. Why do the phagocytes fail in one case and succeed in another?

Churchill's argument has been summarized as follows:

"Tuberculosis is produced by a condition in which the *oxidizable* phosphorus (a natural constituent of the normal system) is more or less deficient. This causes the tubercular diathesis, which precedes, accompanies, and is necessary to the production and progress of the local lesion. Inasmuch as *oxidizable* phosphorus contributes to the tissue-forming elements, circulating in the blood, the faculty of absorbing oxygen, and when absent or lacking in quantity this affinity for oxygen is lost or impaired, the indications seem plain for the administration of this lost or decreased element, in an oxidizable condition, whereby it would be reasonably supposed that the power to absorb oxygen would be restored to the tissue-forming bodies, enabling them to be properly oxidized while passing through the lungs. This should, therefore and consequently, change the diathesis; and by restoring the natural condition, stop the progress of the local lesion in the lung. When these tissue-forming elements reach the the lungs in a patient suffering from this disease, they are not properly oxidized, as in a condition of health, not because of a deficiency of oxygen, but because they have lost the power of appropriating it, owing to the lack of oxidizable phosphorus, which by its powerful affinity for oxygen contributes to these bodies, by its presence, the power to seize upon and utilize it. The direct effect of this condition is the precipitation in the lung of a partly oxidized and consequently abnormal matter, which, if properly oxidized, would have continued on in the circulation and have been absorbed as healthy tissue. This precipated in the lung is tubercle."

In accordance with this theory, Churchill introduced the hypophosphites into medical practice, as specific remedies in

tuberculosis. But according to his idea, the acid remaining the same, the bases with which it is combined are suited to very different conditions. Hence, he advised these salts to be given chemically pure, one salt at a time, the effect carefully watched and kept within the useful limit, the treatment continued as long as indicated, complications to receive their appropriate treatment, and the dose of any salt to be kept under seven grains day.

The physiogenic effects to be expected are : Increase of nervous energy, appetite, digestive action, and hematosis, with signs of venous plethora in due time. The increased nutrition is sometimes remarkably manifest in the hair and teeth.

The pathogenic effects are : Disturbed respiration, chest pains, cough, increase of local pulmonary signs, from hyperæmia. If the remedy be still given, hemorrhage takes place. Two signs especially indicate the pathogenic condition : Fullness of the face, and epistaxis. The cheeks are full and the malar region and lower eyelid puffy. The flush is general on the face, not circumscribed like that of hectic.

As to the indications for the various hypophosphites, Churchill considers the iron salt inadmissible in phthisis. Potassium is a powerfnl resolvent of consolidated lung tissue, causing too rapid softening of tubercular nodules. It also causes prostration, loss of appetite, indigestion, etc. Manganese resembles iron, but is less active. The hypophosphite of lime checks expectoration, and if this be done too rapidly, the cough increases. The soda salt increases expectoration, and is to be given when the sputa are tenacious and scanty. The hypophosphite of quinine is of value for young children, and in incipient phthisical diarrhœa. It is also recommended when the other salts produce pathogenic effects.

This brief outline indicates what are Churchill's views, and his method of using the hypophosphites. A fair trial of his method, then, consists of something more than simply "giving hypophosphites." He believes that the different salts meet different indications, and produce different effects. Their uses have been carefully *preconized* by him, and his book can be read by anyone with advantage. His theory has, however, been pushed into the background by the brilliant discoveries of the bacteriologists. That it has not been quite forgotten is largely due to the efforts of Mr. R. W. Gardner, who has persistently kept the Churchill method before the profession.

Letters to the Editor.

ELSINORE, CALIFORNIA.

I CAME to this place, a pleasant country town on the shore of the only lake in southern California, nearly six years ago, with a consolidation in one lung, the size of a man's fist. I have recovered my health as much as possible so that I have not lost a single day in the last year; and know whereof I affirm, that any physician himself having poor health or family needing a change to another climate, will do well to correspond with me

S. H. WASHBURN, M. D.

The Medical Digest.

TREATMENT OF PHTHISIS BY THE FRENCH CLINICIANS:—Live in the Engadine, the Tyrol, if tuberculosis threatens; at Pau, Madeira, Mentone, when it has occurred (Jaccoud); near the sea, only in the absence of fever (Hayem).

Children of tuberculous parents must reside in the country, and be hardened against cold by ablutions and douches of cold water. They must have pure, unconfined air (Peter).

Cod-liver oil, glycerine, arsenic, creosote, salicylic acid (Jaccoud) and quinine for the fever. Atropine for sweats. Cocaine, stomach lavage, superalimentation (Debove,) for vomiting and denutrition. Blisters, actual cautery (Hayem), tincture of iodine locally. Sulphur waters, Cauterets, Eaux-Bonnes in torpid forms without hemoptysis or febrile inflammation; arsenical waters, Royat, Mont-Dore, in other cases (Jaccoud).

Bouchard gives beech-wood creosote, gr. jss, in pill with almond soap powder; one pill every two hours, the daily dose being five to eight pills. In certain cases, with rapid evolution, raise the daily dose gradually to thirty pills.

Dujardin-Beaumetz directs patients to reside where the windows can be opened day and night. They are then in the same condition as sailors and savages, with whom tuberculosis is unknown. Be prudent in this treatment, when the patients have been habituated to a confined atmosphere. Do not change brusquely to the system of continuous fresh air, but let them reach it by degrees. Do not leave the patients to the air alone; there are some other indications, as adjuvants. Let the cases have the benefit of suralimentation, of tonics, analeptics, expectorants, balsams, and all the hygienic measures at our disposal.

Landouzy treats the sweats by powdering the affected parts of the skin with salicylic acid and talc, one part to nine. —*La Pratique Journaliére des Hopitaux de Paris.*

Creosote Enemata.—In chronic and congestive tuberculosis, where the fever does not run too high, and lesions are not too far advanced, treatment by creosote gives good results, especially when it is used in the form of enema. It causes no irritation nor inconvenience, and is equally well borne by children as by adults. Administered through the stomach, it has not these recommendations. The following injection is suggested by Dr. Revillet (Belgium), after cleansing the rectum with warm water: Pure creosote, 2 to 4 grammes, oil of sweet almonds, 25 grammes, yelk of one egg, and 200 grammes of water. To be used at bedtime and continued for months. Dr. Chaland (Belgium), advises 1 to 3 grammes of pure creosote in 100 to 300 grammes of distilled water, well shaken up; or in smaller bulk, 3 grammes of creosote, 10 grammes of brandy and 200 grammes of distilled water. The spirit apparently renders the creosote more soluble. Dr. Kugler recommends 1 gramme of creosote in suppository form, inserted night and morning.—*Revue Medicale* (Belgium).

Tuberculin and its Modifications.—Trudeau (*Internat. Med. Mag.*), places on record a number of cases treated by tuberculin and its modifications. Thirteen patients were treated by Koch's tuberculin. Of these six were incipient cases; of which three were apparently cured, two had the disease arrested and one was improved. Of four advanced cases, in two the disease was arrested and in two the remedy failed. Of three far advanced, two were improved and one failed. These results are but little better than those obtained by climatic treatment. The author limits the use of tuberculin to afebrile cases.

Ten cases with Hunter's modification "B." Four incipient cases were apparently cured; of three pronounced cases, one was arrested, one improved, one unimproved; of three pronounced cases, one was improved and two were not. This modified tuberculin causes less fever than that of Koch, and is altogether preferable, as more efficacious and less dangerous.

Shurly-Gibbes Method.—At the Mississippi Valley Association meeting, last October, H. L. Taylor spoke of the Shurly-Gibbes method of treating tuberculosis, by injections of iodine and gold, and chlorine inhalations or antiseptic sprays. These remedies remove fever and night sweats, lessen expectoration and improve nutrition. Then the hygienic and climatic treatment will succeed in many cases. He used an albolene spray, with 10 per cent. creosote and three per cent. menthol deeply inhaled. This gave marked relief from paroxysmal cough, and maintained asepsis in the respiratory tract.

New Form of Iodine Treatment for Tuberculosis.—Renzi prescribed the use of iodine one part, iodide of potassium, three parts, chloride of sodium, six parts, and distilled water 1000 parts. Having carefully established the complete tolerance of the compound, he began to give it to his phthisical patients. Hypodermatic dosage was first tried with them, as much as 100 grains having been thus given. This method was not well borne, and the remedy was next tried by the mouth, the dose being from 500 to 550 grains. Nineteen patients, nearly all of them with advanced phthisis, were thus treated. Symptoms of iodism were produced in some patients, but did not persist long after a discontinuance of the doses. In all these persons there was an increase of appetite and of body-weight. There was an increased flow of urine, the temperature was brought down to normal, and the number of bacilli in the sputa was diminished. The writer believes that the results obtained from this plan of using iodine will compare favorably with those of any of the other treatments that are at present in vogue.—*Jour. Am. Med. As.*

Hypodermic Injections of Salol in Pulmonary Phthisis.—G. Grossi (*Rif. Med.*, October 31st), reports favorably of the effects of hypodermic injection of salol in cases of pulmonary phthisis. He has tried the method in 11 cases in different stages of the disease. He uses the following solution : Salol g. 10 ; oil of sweet almonds, g. 30. With a special syringe of the capacity of 5 grammes he injects at first 5 g. of this solution every day, increasing the dose after a time by half a syringeful every two days till three syringefuls (equivalent to 5 g. of salol in 15 g. of the oil) are given in the day —at 7 A. M., 12 noon, and 7 P. M. The author states, however, that there is no risk in beginning with two syringefuls a day, and after a few days suddenly increasing the dose to three. The injections are best given in the gluteal region, where they cause neither pain nor reaction ; after a time, however, some local swelling is apt to arise, and it is then well to discontinue the treatment for a short time. Grossi tried cod-liver oil as an excipient for the salol, but was obliged to abandon it on account of the local inflammation which it set up. He suggests that this may have been due to the impurity of the oil. With one exception, in which the disease was very far advanced, all the cases were greatly benefited by the injection of salol; fever and night sweats ceased, cough was relieved, the number of bacilli in the sputum diminished, the patient gained strength and the weight increased. The author has been careful to exclude possible sources of fallacy.

Creosote in the Tuberculosis of Children.—At the Pædriatic Congress recently held at Naples, T. Guida (*Rif. Med.*, October 25th), stated that he had used creosote in various tuberculous affections in children. He preferred giving the drug by the rectum in an emulsion of almond and olive oil with yolk of egg, or in a hydro-alcoholic solution. The dose was progressively increased from a minimum of twenty-five milligrammes to a maximum of one-half to one gramme in the twenty-four hours. In every case great irritability of the rectal mucous membrane was manifested, this being followed after a time by dysenteric symptoms. He had made a number of experiments on guinea-pigs and rabbits, which had led him to the following conclusions : 1. The injection of creosote (however prepared) by the rectum in children is undesirable when any gastro-intestinal disturbance is present. 2. The experiments on guinea-pigs show that the administration of creosote by the rectum is an efficacious means of preventing invasion by the tubercle bacillus, or of lessening its virulence. 3. Administration by the mouth is inadequate for this purpose, inasmuch as it is impossible in that way to introduce a sufficient amount of the remedy to produce a therapeutic effect. If the mucous membrane of the rectum is in a sound condition, even large doses do not cause irritation.

Salophen. — Caminer (*Therap. Monats.*, October, 1892), has used this drug in gramme doses in cases of cephalalgia, neuralgia, and migraine. In two cases of supra-orbital neuralgia it was efficient.

If used in the early stages of migraine it aborts the attacks, but it has no influence on their frequency. In two cases of acute rheumatism the author used the drug with good results, and there was no relapse.

Atropine in Hæmoptysis.—M. B. Blumenau (*Meditzinskoie Obotzrenie*, No. 9, 1892), emphatically confirms recent statements (see the *Epitome*, May 28th, 1892, par. 87), as to the powerful hæmostatic properties of atropine. He relates the case of a phthisical soldier, who was expectorating one and a half or two tumblerfuls of pure blood daily, in spite of the application of ice bags to the chest, and the internal use of ergot and mineral acids in full doses. On the fourth day of the hæmoptysis $\frac{1}{60}$ grain of sulphate of atropine was injected under the skin. The blood spitting at once considerably decreased, and, after a second injection on the following morning, speedily ceased altogether. The patient's sputum remained slightly tinged with blood for a few days afterwards, but the discoloration soon disappeared, and the man was discharged in a satisfactory state. In the way of secondary effects only slight dryness of the throat and some acceleration of the pulse were observed for a short time.—*Brit. Med. Jour.*

Creosote in Phthisis.—In a new communication on this subject the writer reaffirms the convictions expressed by him in previous papers as to the great value of this remedy. He finds that it relieves cough, lessens expectoration, improves nutrition, and lessens the number of bacilli even to extinction. The physical signs show evidences of a lessened area of damaged pulmonary tissue, and even the occlusion of small cavities.

The objections to the use of creosote are few ; and usually obviated by a little judgment. Occasionally the stomach becomes intolerant ; shown by headache, inappetence, and a sluggish feeling in the performance of usual duties ; or there is slight pain or uneasiness in the stomach, evidently brought on by the creosote. These ill effects are frequently occasioned by a too rapid increase of the dose, by faulty administration, or by idiosyncrasy ; or there is an irritative or weak stomachal condition dependent on catarrhal gastritis, or a possible atrophy of the gastric tubules. The remedy of this state is not far to seek. Diminish the dose or interrupt its use for a while, and resume in small and slowly increasing doses, and more frequently repeated, only after a period of complete rest from taking it. If diarrhœa be occasioned by its use, the same rules apply, or, indeed, an appropriate opiate may be added in small amount to each dose with good effect, so far as toleration is concerned.

Usually the ordinary tests for creosote do not show its presence in the urine. It has been found there, however, and it may irritate the kidneys at times in a pronounced manner. I do not believe this will often take place, unless large and frequent doses of the drug be given.

It is true that under these circumstances I have recognized a passing albuminuria, which disappeared when the amount of creosote taken by the patient was diminished. Examine the urine carefully every few days, at least, when the patient is taking large amounts of creosote. When renal disease exists, I have given creosote and have observed no ill effects from its use, although it is true I have not been willing to increase the dose beyond six or eight minims in the twenty-four hours.

According to Dujardin-Beaumetz, creosote in appreciable doses, while it is eliminated from the body by way of the respiratory organs, congests the bronchial mucous membrane, and thus promotes the occurrence of pulmonary hemorrhage. According to him the drug is strongly indicated whenever hemorrhage actually occurs. Nothing in my experience thus far tends to corroborate this view .It seems to me prudent, however, to recognize the possibility of what Beaumetz affirms, and for this reason to interrupt the use of creosote during the time there is hæmoptysis, or an evidently imminent tendency to it.—Beverly Robinson, *Med. Record.*

Sommerbrodt has recently published his further experience in the use of creosote against tuberculosis. In his earlier report he said that eight minims a day

would cure every case if taken in the beginning; he is now convinced that larger doses up to 25 to 60 minims a day will cure even severe and advanced cases. He does not, of course, claim to cure every case, but he is positive that larger doses of creosote will do more for many tubercular patients than any other drug; and his motto is "The more creosote that can be borne, the better." The maximal doses given in the pharmacopœias are much too small, according to him; he begins at ten years of age with 15 minims daily, and increases this to 60. He formerly gave it in capsules with balsam of tolu; but this method he abandoned as soon as he discovered that very often the balsam was not absorbed, but passed by the bowel undigested, He now gives it in capsules mixed either with cod-liver oil or olive oil, Sommerbrodt claims that creosote, if its use is persisted in for years, will allow people who cannot get away to remain at home in comparative comfort. No fear need be felt of a bad effect upon the stomach, as Sommerbrodt has given patients as high as 20,000 capsules without affecting the appetite injuriously; the most that was noted was a slight belching during the first week, which soon disappeared.—*Gaillard's Medical Journal.*

WHAT the patient must see to is that under no circumstances shall his expectoration be allowed to dry before it is destroyed, or placed where it can by no possibility be a source of danger. To this end he must scrupulously avoid spitting on his handkerchief, on the floor or on the ground. When away from his home he should carry with him a small flask containing a small quantity of five per cent. solution of carbolic acid or corrosive sublimate, a grain to the pint, or some other disinfectant. At the last meeting of the American Public Health Association a flask was exhibited designed for this express purpose, having a movable cover on each end, in order to allow of its being thoroughly cleansed. In the house it would be well to use a small paper cup, which should be set inside a china or metallic cup, the latter containing a disinfectant solution which should moisten the bottom of the former. This paper cup should be burned, or otherwise safely disposed of, at least once a day, if the expectoration is considerable, much oftener.—*Circular, Penna. State Board of Health.*

PRIZE FOR ESSAY ON TUBERCULOSIS.—The Congress for the Study of Tuberculosis announces a prize of three thousand francs for the best essay on "The Means of Diagnosticating Latent Tuberculosis before its Appearance or after its Cure. The essay must be written in French and sent to Dr. L. H. Petit, 76 Rue de Seine, Paris, before April 1st. 1893. Each memoir should be accompanied with a sealed envelope containing the author's name and address.

GUAIACOL.—A. Jacobi gives guaiacol in four daily doses, after meals and at bed-time, in sweetened water or in milk. The maximum daily dose was twenty-eight drops for adults; twelve drops for children. The drug was also used by inhalation in ten cases. The cases numbered over 100 in all. As to the results, he says: "When the first patients who took guaiacol—a few in September, more in October and November—turned up again in December or about New Year's, after most of them had been exposed already to the winter crowding, closed windows, and winter weather, I was surprised at the almost uniformly favorable reports volunteered by almost all. There was hardly one but looked better and felt better; even a few absolutely hopeless cases with large cavities asserted they ate better, slept better and sweated less. Most looked fairly well, and their strength had improved. In almost none had emaciation increased, most had gained flesh, one ten pounds in two months. I will say right here that in every case where the diagnosis was not absolutely clear without it, the examination for bacilli was made and their presence proven positively. In many digestion and appetite had improved at once. Cough became looser, and after a month or two appeared to be more mucous and less purulent.

I have not felt justified, in a large number of cases, to limit my therapeutical endeavors to the administration of guaiacol alone. The employment of arsenic (mainly arsenious acid) and digitalis in some form or another has rendered

me such eminent service in the treatment of tuberculosis, that in at least half of the cases I have combined them with the use of guaiacol. The best method of giving them is in the shape of pills; almost everybody takes readily two milligrammes of arsenious acid (gr. $\frac{1}{30}$) and two or three milligrammes of (Merck's) digitaline three times a day. This mode of administration has besides its tastelessness and its long toleration when taken after meals, the further advantage of the facility with which strychnine or another preparation of nux vomica, perhaps also a mild laxative or a constipating drug are combined with it. For indeed the disturbances of a universal tubercular process are many and various. They are in most cases anatomically tangible. Even if they were not so, I am not ashamed of owning up to my weakness of trying to make my patients comfortable, though a prescription may consist of more than one or two items. I still believe in my old saying that I prefer a prescription that acts well to one that looks well.

During cold weather cod-liver oil was recommended to all patients with fair digestion. Those with good cutaneous circulation would wash and rub with cold water, or water with alcohol, or warm water with alcohol, over all or part of their bodies. The complications with nasal and naso-pharyngeal catarrh were treated with salt water, sprays of nitrate of silver (1 : 20—1000), also with irrigations of acetico-tartrate of aluminium in water (1 : 75—120). Night-sweats have been treated with a single dose, given at bedtime, of a milligramme (gr. $\frac{1}{60}$) or less of atropine sulphate, or agaricine from six to twelve milligrammes. They may be combined, and frequently, when nocturnal cough proved too great a torture, one or both were combined with a dose of morphine.—*International Med. Mag.*

Advice to Consumptives.—Go to Southern Pines, N. C., and engage in raising grapes, making wine, and drinking it. Live in a log hut, or a tent, in among the pines, inhaling the aroma of the turpentine all day and all night. And when you have recovered your health, stay there and keep it.

Creosote for Pulmonary Tuberculosis.—Among those recently advocating creosote is A. L. Hall, of Fair Haven, N. Y. (*Med. Record*). He favors its use in full doses, following the German custom. He employs the following formula:

℞.—Pure beech-tar creosote . . . ℥i.
Fluid extract gentian . . . . ℥ij.
Comp. tinct. cardamom . . . ℥i.
Alcohol . . . . . ℥ij.
Syrup . . . . . ℥viij

M. S.—℥i at a dose. The gentian and creosote are to be increased as rapidly as toleration will permit.

Littlejohn strongly recommends a residence in the Rocky Mountain region, between El Paso, Texas, and Central Wyoming. His reasons are, as he states in the *Med. Record*, the living examples of consumptives now cured by residence in this section.

The Pre-tubercular Condition.—Station first—*Subjective*. General malaise, not fitting into the frame of recognized acute or chronic disease; in this respect comparing to neurasthenia, also diagnosed by exclusion. As stated above, general malaise is a falling off from the individual norm of eating, breathing, muscular power, refreshing sleep, buoyant mind, etc. This impaired general condition leads up to the local lesion, both subsequently uniting to bring about destruction.

Station second. The above subjective symptoms *plus* the objective change in the character of the respiratory elements; but as yet no râles, either dry or moist.

In the second period the general condition has advanced to noticeable loss of adipose tissue in some, or of red blood-corpuscles to the verge of pernicious anæmia in others, or both combined. The order of importance in respiratory changes in auscultation are (1) quality. (2) pitch, and (3) rhythm. The changes now occuring are in the reverse order of their importance—rhythm first, then pitch, then quality. This is the main point I wish to emphasize. *Rhythm*: Interrupted (cog-wheel) inspiration, a pause not existing in the norm, a prolonged and audible expiration. *Pitch*: Higher than the original vesicular low pitch. This holds good of both auscultation and percussion, in accord with Dr.

Leaming's great law : low pitch denotes porosity, high pitch denotes density. *Quality*: From vesicular to broncho-vesicular; and finally bronchial, or tubular as I prefer to call it.

Station third. Dry followed by moist râles and gurgles, according to whether the tubercular invasion begets a localized or widespread bronchiolitis or local excavation. The third station for pre-tuberculars, then, is either a direct rush into diffused tuberculosis (general bronchiolitis, or tubercular pleurisy) in those of destructive metabolism, or a more gradual destruction by infiltration and excavation, perhaps with subsequent limitation, in those of constructive metabolism.

In conclusion, I offer the following maxim : The pre-tubercular condition is an as yet undemonstrable tubercular invasion, engrafted upon those whose nutritive changes have brought them to a condition below par as compared with their usual physiological standard. This physiological unit is strictly and absolutely individual.—Tyndale in *The Climatologist.*

Repairing Damaged Throat and Lung Tissue. In Connection with the Mineral Treatment in Tuberculosis.—In hæmoptysis, catarrhal discharges from mucous surfaces, bronchorrhœa, cavities, etc., I find inhalation of ammonium chloride, oil of pine and beech-wood, guaiacol, produces a most marvellous effect in connection with the mineral treatment, viz : Mercury, gold and zinc, which I have been advocating for some time in my articles in The Times and Register.

I have given a condensed outline of the mineral treatment, and, since my last article, I have added to it the inhalation treatment, the guaiacol ; which, I am glad to say, is marvellous in its results in the treatment of the damaged conditions of the throat and lungs, above named ; and also as a means of restoring the normal expansion of the lungs and the elasticity of the lung fibre.

I also give guaiacol internally in connection with the mineral treatment, combined with a good syrup of hypophosphites. I find that cases, as a rule, improve remarkably after using one of the minerals with guaiacol, and when the latter can be brought in contact with the mucous surfaces of the air passages, as well as the alimentary canal, especially the stomach, remarkable results have been generally attained.

It is necessary to keep the glandular system in as perfect order as possible, so that the peculiar fertilization necessary to enable the muco-serous tissues to entertain and develop the germs of tuberculosis, may be so counteracted or annihilated that this predisposing cause will be removed ; in proportion to the amount of secretion eliminated through the normal channels. If this is done by proper flushing, and by stimulation of the glandular system by one of the three minerals, the choice depending on the temperament and diathesis of the patient, and his susceptibility to the treatment which should be chosen, it is possible not only to restore the damaged throat and lung tissue, but also to increase the volume of blood, which has been reduced by malassimilation, and incapacity to receive food.

The fermentation of food in the duodenum must be overcome, and if this can be done and the volume of blood increased, it is possible to prolong the lives of seemingly hopeless cases and to reduce their susceptibility to tuberculosis to such an extent that they may live to old age. I am convinced, by my results in the treatment of consumption during the last two years, that seventy-five per cent. of all cases could be saved, if proper treatment were secured, and I am warranted in saying that my success will corroborate my assertion.

Of course it will be understood that consumptives who have suffered with inanition and mal-assimilation of food, to such an extent as to have reduced their volume of blood too much, cannot be cured ; but may be wonderfully relieved and their lives prolonged. I have quite a number of just such cases on hand now. I do not hesitate to tell them at once that they cannot be cured, but that I may be able to prolong their lives. I find it best always to be honest and tell them the truth.

Climate has but little to do with successful treatment, only so far as the change of surroundings is accompanied with a more active life, out-door exercise,

stimulating the glandular system, regulating the bowels, and in this manner relieving the obstructed condition of the duodenum and the impaction of the colon. This increases not only the capacity and the desire for food, but also the volume of the blood. So it is very perceptible that if the secretions are kept in the normal channels, and the body cleansed inside and out, so to speak, success is, as a rule, the result. The change of environment, in many cases, is just as beneficial and not so dangerous as a journey to some distant clime, where many go, only to die. How true is the saying : "Distance lends enchantment."—Shade, Washington, D. C.

TREATMENT OF PHTEISIS IN JAPAN.

For afebrile cases :

℞.—Creosoti, ...	♏iv.
Acidi gallici, ...	gr. ij.
Ferri redacti, ...	gr. ij.
Calcii hyphophosphatis, . . .	gr. iv.

M. Ft. pil. no. viij.
S. One pill thrice daily.

For febrile cases :

℞.—Creosoti, ...	♏iv.
Acidi gallici, ...	gr. ij.
Zinci sulphatis, ...	gr. ij.
Pulv. opii.	gr. ss.
Pulv. digitalis, ...	gr. ss.

M. Ft. pil. no. v.
S. One thrice daily.

For night sweats, with fevers at night :

℞.—Creosoti, ...	♏iv.
Acidi gallici, ...	gr. ij.
Zinci sulphatis, ...	gr. ij.
Atropinæ sulphatis, ...	gr. $\frac{1}{120}$.

M. Ft. pil. no. v.
S. One thrice daily.

—*Sei-i-Kwai.*

IN the *Medical Record*, G. H. Penrose sums up an article on creosote as follows:

"I will not burden you with the histories of any of the cases, as none were marked failures or marked cures, but in each there was marked improvement, and it is because of this gradual improvement that I think we have the more encouragement for continuing the use of creosote in every case of tuberculosis.

"In conclusion, I should like to urge the use of creosote in progressive doses, and think that if previous observers had used the drug in larger doses their results would have been better and more decided. I cannot agree with Professor Flint in the assertion that creosote has but little more than a palliative action in cases where cavities exist. In several instances we have noticed decided improvement in such cases.

"I do not claim, nor do I think, that we have a specific in creosote, but from careful observation of several hundred cases of this dreadful disease, I do think we have a drug of infinite worth, and, as such, deserving of careful use and more careful study."

TREATMENT WITH THE SERUM OF DOG'S BLOOD.—The interesting experimental investigations of Richet and Hericourt, announced during the past year to the French Academy of Sciences, with the serum of dog's blood in the treatment of tuberculosis, are in the line of thought that at present underlies our attempts to cope with the disease. These observers have been able to demonstrate that in rabbits inoculated with a culture of the tubercle bacillus, the evolution of tuberculosis can be arrested by subsequently subjecting the animal to injections of dog's serum. When very virulent cultures are employed, the evolution is only delayed. Injections of a healthy animal with the serum prevent the development of experimental tuberculosis at a later period. The effective substance has not been identified as yet, but a small dose of the serum is sufficient (one-half cubic centimetre per kilo of the rabbit).

The clinical results obtained in tuberculous disease of human beings by this method of treatment, which has been fully tried in the Paris hospitals, would indicate that it also fails rather in the degree than in the kind of its action. It certainly acts as a potent stimulant to cell activity. Whether it possess another action is undetermined.—Kinnicutt, *Med. Record.*

WALZER recommends benzosol guaiacol as a substitute for creosote. Benzosol is pleasanter to take, being odorless and tasteless. In the stomach and small intestines it splits up into guaiacol and benzoic acid. The results obtained from its use by Walzer were fully equal to those afforded by guaiacol. The daily dose is twenty-four grains. It may be given in lozenges, with sugar and chocolate.

CRIADO regards the sanatorium as the most dangerous source of tubercular infection (*Brooklyn Med. Jour.*). Concerning aristol, he quotes Herard's report as follows:

"After having observed the excellent effects of aristol on scrofulo-tuberculous lesions, and found that aristol was perfectly innocuous in internal medication, M. Nadaud decided to make use of hypodermic injections formulated as follows:

Oil of sweet almonds (sterilized) . 100 c.cm.;
Aristol . . . . . 1 c.cm.
The solution should be filtered.

"Nadaud's first injections were made upon a child aged seven years, who, after an attack of coxalgia, had several abscesses followed by fistulous tracts. One cubic centimetre of aristol was injected daily. After twenty-five days of treatment there was no trace of suppuration to be seen. In consequence of this result, Dr. Nadaud decided to test the value of hypodermic injections of aristol in the treatment of pulmonary tuberculosis. Twenty-three patients suffering from tuberculous lesions of the lungs were successively treated by injections of aristol without any other medication whatever. In seven cases the amelioration was so great as to induce the belief that complete cures had been effected. The treatment covered from twenty-five to thirty days. The amelioration has continued up to the time of writing—*i. e.*, from three to four months. In five of the twenty-three cases there was a prompt amelioration, but in a month after the cessation of the treatment some symptoms were observed which seemed to call for a second series of injections. Generally the relapse was of slight importance, and the patients in this category soon resumed their habitual occupations. In no case was it necessary to make a third series of injections. The rest of the cases are still under aristol treatment. In concluding his paper, Dr. Nadaud said: 'The effects of aristol are promptly observed, usually on the sixth or seventh day of medication, and are first manifested by a diminution of the cough and a suppression of night-sweats. After twenty or twenty-five days of treatment we find that the patient has increased in weight. Aristol gives its best results in the first and second stages of pulmonary tuberculosis. The injections do not cause inflammation, irritation, abscess, eschar, or induration.'"

DR. UTLEY, of Los Angeles, says that part of California is too damp for consumptives. On the foot-hills, twenty-five miles from the seacoast, the soil is sandy, the water pure, and here would be the place for a sanatorium for incipient phthisis. Branches should be opened at Banning, in the mountains, or summer camps in the canons where the air is dry and rarefied; also at the seashore for suitable cases.

In the ensuing discussion, Dr. Potter spoke favorably of "The Needles," a low sink, in which patients can sleep out of doors all the year round, and breathe the hot, furnace atmosphere, where no germ can live long. It is not a pleasant place, and patients do not stay there very willingly.—*Southern Cal. Pract.*

DR. JOHN NIXON treats phthisis in the following manner: The patient is placed in a pneumatic cabinet; the air-pressure reduced to one or one and one-half inches (mercury gauge), and the air medicated with eucalyptol and creosote, finely divided by steam. The patient remains in the cabinet for ten minutes, and the treatment is repeated daily. The usual good effects are said to follow, with one not usually noted, viz.: An insusceptibility to catching cold.—*Indiana Med. Jour.*

DR. FLICK claims that the doctrine of contagion in tuberculosis, and the public attention directed to the means of preventing contagion, have already reduced the mortality from this cause in Philadelto the extent of 784 lives saved per annum.

A FRENCH observer claims to have found tubercle bacilli in bed bugs, and that they act as carriers of this disease-producer.

SMOLIKOSKY recommends creosote by the rectum, mixed with olive oil, yolk of egg, etc.

DR. FLICK still puts his trust in iodoform inunctions; claiming that they will cure tuberculosis in the early stages. Later, he uses creosote in addition, as well as tonics and forced nutrition.

TROCHET'S capsules of colchicum salicylate contains colchicim, ¼ milligramme, and twenty centigrammes of the natural methyl salicylate, derived from oil of wintergreen. The superiority of this product to the synthetic acid of commerce is too well known to require comment. The capsules form an elegant method of administering a combination of undoubted efficacy. The American agent is the house of E. Fougera & Co., of New York.

News.

The physician whose notions of beef preparations relate with the old-fashioned Liebig extracts can have little idea of the perfection to which the modern manufacturers have carried them.

The (London) *Lancet*, April 30, 1892, speaking of Wyeth's Beef Juice says:—

"The following analytical notes and results testify unmistakably to the excellence of this preparation. It is a dark reddish-brown liquid of pleasant beef-like flavor, and free from objectionable preservatives. It contains not only the albuminous principles of beef in an active and soluble form, but in the condition in which they occur in the freshly expressed juice of beef itself. Viewed with the spectroscope a dilute solution is seen to give two absorption bands, characteristic of fresh blood or hæmoglobin. The liquid loses this property, however, as soon as it is boiled; while the coagulated albuminous principles assume a blood-red tint. According to our experiments no less than fourteen grains of solid albuminous principles in every fluid ounce are thus precipitated. The following figures gained in analysis will convey some idea of the eminent degree of concentration through which this preparation has been carried. Notwithstanding this, the vital elements of beef juice it contains have been preserved unchanged. Moisture, 44.87 per cent.; organic matter, 38.01 per cent.; mineral matter, 17.12 per cent. The organic material contains 4.57 parts of nitrogen and the mineral matter consists largely of common salt, and, of course, soluble phosphate. Results like these make it safe to assert that as an example of preparations of this class Wyeth's beef juice is little short of perfection."

Mr. Wyeth states that on receipt of 50 cents he will send to any physician a bottle of this beef juice (retailing at 75 cents) carriage paid, for personal trial.

Dr. Fessenden N. Otis recently visited Japan, and was warmly welcomed there. The Surgeon-General ordered a supply of Otis' special instruments to be provided for the Japanese army surgeons.

A sad state of affairs prevails in Japan, where the old and the new, native and foreign, ideas do not harmonize; while custom clings to the old. The doctor formerly dispensed his drugs, receiving cash for them, and a present of cakes, eggs, or fish for his advice, and if the patient forgot the cash, the doctor was too polite to ask for it. With the advent of foreign medicine came the retail druggist. But as he got all the cash, and the doctor could not live on cakes and eggs, the latter was compelled to return to his dispensing in order not altogether to forget what cash looked like. But now the drug men clamor for the government to restrain the doctor, and forbid his dispensing drugs.

We hope the Japanese will find a way to settle the difficulty to the satisfaction of all parties—and let us know how they do it.

CHICAGO can at last boast of a weekly medical journal of its own. And what do you suppose is this product of the great western city's medical culture? Ad epitome of the original papers in the London *Lancet!* The abstracting is well done; but the original is better worth $7.50 a year than the epitome is worth $1.00.

Take advantage of our department, Bureau of Information. Questions on all subjects relating to medicine answered by return mail. Open to subscribers.

The Times and Register.

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Original Articles.

GYNECOLOGICAL TECHNIQUE AS CARRIED OUT AT THE GYNECEAN HOSPITAL.

BY J. M. BALDY, M. D.

[Read before the Philadelphia County Medical Society, December 28, 1892.]

IT is no uncommon thing to have physicians from all over the country, who are making a temporary stay in Philadelphia, and who are visiting the hospital with the object of seeing operations, question minutely as to the different points in the preparation, and not infrequently express surprise at the simplicity of these. In fact, it has often occurred to me that many of our visitors are more interested in the preparation than in the operation itself. To one who has the success of this class of work at heart, this seems to be a step in the right direction, as it has long since been recognized by the successful operators of the world, that more good results are obtained by mediocre operators, whose preparations have been most careful and systematic, than by their more brilliant colleagues who have been inclined to scoff at minutiæ and to depend upon their mechanical skill.

From time to time articles on this subject have appeared in medical print giving the most elaborate description of the preparation and the apparatus used, most of which are undoubtedly excellent and well fitted for the operating-room of a hospital, but which are unnecessarily cumbrous when one comes to apply them to private work. For this reason I have been encouraged to enter upon a detailed description of our work at the Gynecean Hospital, the application of which can readily be carried into private practice. The watch words from the beginning to the end of an operation are *thoroughness* and *simplicity*.

The aim of all successful operators is the same, namely—the prevention of any septic matter entering into the field of operation. Different operators adopt different methods of accomplishing this object, but for success, the object and result must be the same, whatever the method adopted may be.

Antisepsis or *asepsis*, as fancy may dictate, the principle is the same. To be successful one must be surgically clean. For the proper accomplishment of this one must consider and treat: 1. The patient. 2. The operating-room and its paraphernalia, including tables, basins, pitchers, buckets, instruments, ligatures, sponges, dressings. 3. The operator, assistants, and nurses.

1. THE PATIENT.—The preparation of the patient should begin, when possible, at least twenty-four hours before the operation. The first steps are to regulate the diet and empty the gastro-intestinal tract. Free purgation is begun at once, preferably by the use of some saline. This is usually administered in the dose

of a drachm of sulphate of magnesia, dissolved in water, each hour until the bowels begin to move. Usually five or six doses are sufficient to accomplish the object. The purgatives should be so administered that the action of the bowels ceases five or six hours before the time set for the operation. After beginning the administration of the purgative, the diet should be light and concentrated. If the operation is to be performed in the afternoon, the patient's supper on the day before consists of the ordinary house diet. From this time on nothing passes her lips, unless it be a glass of milk or a cup of bouillon at breakfast-time. Even water, except in small quantities, is withheld. These steps in the preparation can be carried out in the case of most patients, but in dealing with an unusually weak woman, considerable judgment must be used in their application. A hot bath is given, both the day before and the morning of the operation. If the patient is unable to be moved to the bath tub, the baths are given in bed. Prior to the final bath an enema of soapsuds and water and a vaginal douche of bichloride of mercury (1 to 3000) are given. Immediately on coming from the bath a fresh night-gown is put upon the patient and she is placed in a bed which has been specially prepared for her reception. After returning to bed the abdomen—the seat of the operation—is especially prepared. A nail-brush, soap and hot water are used freely and vigorously, special attention being paid to the umbilicus and pubic hairs. In but exceptional cases is the pubes shaved. The abdomen is then bathed with alcohol and turpentine and is finally protected until the time of the operation with a towel wrung out of bichloride solution.

When the patient is placed on the operating table the abdomen is well rubbed with ether and bathed with alcohol by the operator as the final preparation, especial attention being paid to the pubic hairs and the umbilicus. The legs are wrapped in a blanket, which extends from the feet to the pubes; a second blanket is placed over the chest. All blankets, clothing, table, etc., about the patient from her chest to her feet are now covered with towels prepared for the purpose, the abdomen being left bare from the epigastrium to the pubes. Over all this is placed a piece of bichloride gauze, with a slit in it at the point of the incision.

2. The Operating-room and its Paraphernalia.—All tables used in the operating-room with the exception of the Krug frame for Trendelenburg's position, which is of galvanized iron, are made of wood, perfectly plain and shellacked. The reason for this is twofold—first, because it is desirable in the preparation of the room that it should be emptied; this is rendered possible in the case of everything except the gas fixture and the sink. Secondly, as there is an operating-room on each floor, it becomes necessary to frequently move the tables from one room to the other. When not in use, the windows in these rooms are always open. The walls of the room from floor to ceiling are of white tile, the window trimmings are of white marble, the floors are asphalt, the ceilings are plastered and heavily painted. In the preparation, the room is first stripped of all its furniture. The walls, ceiling and floor are washed down with a hose, and then mopped off with a cloth dipped in bichloride solution. As each article is brought into the room it is scrubbed with soap and water, rinsed off, mopped with bichloride solution, and placed in its proper position; the tables and benches are covered with sheets or towels specially prepared for this purpose. A glance at the accompanying cut will more clearly demonstrate this.

All linen used in the operating-room has been laundried by itself. Distilled water is used throughout the operation.

Instruments.—After an operation the instruments are thoroughly scrubbed with soap and water, and are then passed through scalding water before being returned to the case. Prior to the operation they are boiled for twenty minutes in a weak soda solution. As few instruments as possible are used. In an ordinary operation, two needles, two ligature staffs, four hemostatic forceps, a knife, a needle-holder, and a pair of scissors are amply sufficient. These are taken, together with the tray on which they are placed for boiling, directly from the sterilizer, and put upon the table as

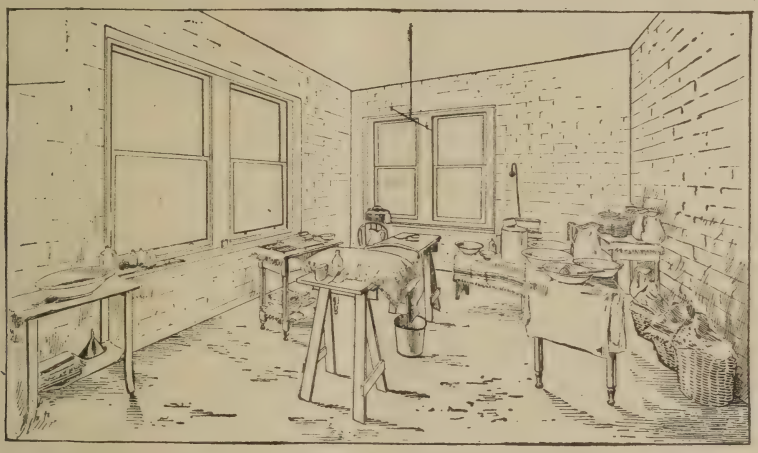
the patient is brought into the room. In this way they are not handled from the time they are taken out of the sterilizer until they are to be used.

Ligatures.—Three varieties of ligatures are employed—silk, silkworm gut, and catgut. A half-hour before the operation the silk is immersed in a bichloride solution (1 to 100); prior to being used it is washed in boiling water. The silkworm-gut is boiled with the instruments. The catgut is prepared by being immersed in ether for forty-eight hours, soaked for the same length of time in a 1 to 100 alcoholic solution of bichloride of mercury; after which it is put in a solution of two parts oil of juniper and one part alcohol. It is taken directly from the latter solution for use at the operation.

All sutures and ligatures used within the abdominal cavity are of silk (Chinese twist). Silkworm-gut is invariably used for closing the abdominal wound. Catgut is used principally in vaginal hysterectomy and plastic work.

Sponges.—New sponges are prepared by being thoroughly beaten, soaked for twenty-four hours in a weak solution (3 per cent.) of hydrochloric acid, after which they are soaked for twenty-four hours in a strong soda solution, and are finally placed in alcohol. Immediately after being used in an operation they are thoroughly washed in cold water placed in a strong soda solution (practically a saturated solution) for twenty-four hours, at the end of which time they are removed, washed under the cold-water spigot until all the soda is washed away, and are then immersed in a solution of sulphurous acid for twenty-four hours. They are taken directly from the acid solution, washed, and placed in commercial alcohol until used. Four sponges only are used at each operation.

Dressings.—The dressing of the abdominal wound consists in placing several strips of dry bichloride gauze over the incision, a cotton pad covered with gauze placed over this, and the whole held in place by a six-tailed bandage. Dressings are not disturbed for eight days. No iodoform or other powder is used. Stitch-hole abscesses are the rare exception.



Drainage-tubes.—After being used, the glass drainage-tubes are soaked in strong soda solution for twenty-four hours, rinsed under the spigot, washed with turpentine and ether, and then boiled for twenty minutes, after which they are kept in commercial alcohol.

Rubber drainage-tube, whenever used, is soaked in bichloride solution, and washed in boiling water.

After an operation the drainage-tube is cleaned by the nurse every fifteen minutes or half-hour, as occasion requires. As the fluid discharged from the tube lessens in quantity, the intervals of cleaning are lengthened. Each time the tube is cleaned the nurse's hands are carefully prepared with soap and water and bichloride solution.

At and after each cleaning the syringe used to withdraw the tube contents is cleansed inside and out with hot water

and bichloride solution, as are also the mouth of the tube and the rubber protecting it. Fresh bichloride cotton is placed over the entrance of the tube at each cleaning. The tube is removed as soon as the contents become clear and small in quantity. The edges of the opening left by the tube are drawn together by a strip of adhesive plaster, and the dressings replaced by fresh ones.

3. The Operator, Assistant, and Nurses.—Everybody who takes part in an operation, and is liable during its performance to handle any of the instruments or materials; is required to go through the same preparation. All assistance is rendered by three nurses; the chief nurse assisting the operator directly, a second nurse attending to the sponges, and a third nurse changing the waters. The preparation of operator and nurses is as follows: a hot soap bath, and clean linen clothing direct from the wash. The hands and arms are prepared by first carefully cleansing the nails with a penknife, a free use of hot water, soap, and nail-brush for twenty minutes, and rinsing in fresh water. They are then bathed in commercial alcohol, and are finally soaked in bichloride solution (1 to 2000) for five minutes. The greatest danger-point of infection is, of course, under the nails; and time used in a most careful hand toilet is never misspent—is, in fact, absolutely essential to success.

A careful study of the cut, which represents one of the operating-rooms as it appears prior to the introduction of the patient, will demonstrate the simplicity and thoroughness of all the preparations. There is not an article in the room which cannot be duplicated or easily substituted in almost any well-ordered household. Soap, water, nail-brush, and bichloride of mercury tablets are easily obtained, and as for the remainder it rests entirely with the surgeon and his nurse. With a little more time and trouble the poorest hovel can be turned into a good and safe operating-room, by adopting these rules, as I have been able to demonstrate time after time in my work in the slums of this great city. Of course, it means plenty of hard labor for both nurse and surgeon, but what nurse or surgeon who has once passed through the horrors of attendance at a death from septic peritonitis would not feel that the work before the operation was as nothing in comparison to that afterward.

The number of instruments, sponges, etc., may seem to many to be entirely inadequate for the purpose but in many hundreds of operations we have found them amply sufficient: it is the rare exception that recourse to the instrument-case is necessary. The fewer articles used the fewer sources of possible infection and accident. A large number of instruments lying about are, in addition, a source of endless confusion and annoyance, and they require an extra assistant.

SULFONAL.

By HERMAN D. MARCUS, M. D.

A HYPNOTIC which can safely be administered, which shows none of the deleterious effects of chloral and opium, which is both tasteless and odorless, such an hypnotic must undoubtedly be considered the peer of its group.

In sulfonal (diethyl sulfon-dimethyl methane) we have just such a drug.

One of the greatest difficulties to be surmounted in the preparation of an hypnotic was the necessity of tastelessness and freedom from odor.

Hypnotics in their long range of usefulness lose a great deal of their value, when such drugs must be exhibited in patients who refuse to take medicines—sleep is one of our greatest aids in combating disease and when it *must* be produced by medication we will very often find a positive abhorrence against the use of sleep producers.

Very often your patient will refuse to take your hypnotic on the plea of bad after-effects, habits and a thousand and one other reasons.

With sulfonal all these objections are laid aside; we are able to administer it in a cup of tea, a plate of soup or any other warm beverage without the knowledge of our patient.

The greatest dangers to be encountered with such drugs as chloral and opium are their influence on the nervous and circulatory systems. Sulfonal is positively free of such dangers and even larger doses affect in no way the blood pressure.

Since its introduction by Baumann

and Kast, article upon article has been written upon this drug. Pro and con were the various opinions, still, when a practitioner driven to his wits end looks around for a reliable hypnotic and prescribes sulfonal intelligently, he will always class it high above all others in the group of "sleep producers."

Varied as the use of sulfonal has been, none but the best reports can be found, and though articles on sulfonal poisoning have time and time again appeared, it is very easy to reduce such articles to excessively large doses or faulty administration.

Prof. H. M. Field speaks very forcibly on the administration of this drug and says, "The essential conditions of success in the exhibition of sulfonal depend on, first, the time when the remedy is administered; second, the method of administration; third, the dose."[1]

Sulfonal should be administered from one to three hours before retiring and is best given in some warm liquid, such as hot tea, milk, broth, etc.

"The dose should be carefully adjusted to the requirements, and peculiarities of each case,"[2] and ranges from five to forty grains. Ten to twenty-five grains are the doses generally used.

Dr. Vorster[3] reports two cases, one of periodic, and one of chronic mania, who were given four grams (one drachm), for a few days.

Since its introduction (1886), sulfonal has been made the subject of extensive study and its effect in various diseases has been carefully observed.

In the treatment of insane patients, it is superior to any other hypnotic, the ease with which it may be administered being a great point in its favor.

One of the greatest difficulties encountered with insane patients, is their abhorrence of medicine and when such medicine can be given in their food, without their knowledge, it is certainly a great convenience.

Dr. B. Lucius Gray (Chicago Sanitarium), speaks highly of its value in "those cases of exhaustional and confusional forms of insanity, where sleep has been long delayed and the mental disturbance is great."[4] He found in such cases fifteen grains sulfonal sufficient to produce from two to eight hours sleep. Contrary to Dr. Alexander's experience he found one case of recurrent mania where sulfonal produced refreshing sleep with a tendency to shorten and diminish the severity of an attack.

Dr. Vorster[5] who had used 9000 grams sulfonal on fifty-six patients found that methodical treatment was always followed by rest of the motor centres. He used sulfonal in secondary, acute, and chronic insanity, acute, periodic, and chronic mania, dementia senilis, idiocy, epilepsy and progressive paralysis and concludes by saying: "We recognize a decided addition to psychiatric therapeutics in the methodical sulfonal treatment."

Cases of simple insomnia are readily combated by the use of this drug. One case of a man fifty years old under my treatment had suffered nearly three months with insomnia. Bromides were prescribed in thirty grain doses, chloral in twenty grain doses and morphia hypodermically (¼ grain), had no effect whatever. I finally prescribed sulfonal fifteen grains. Two hours after taking the drug, the patient fell asleep, sleeping for four hours and after being awake for perhaps one-half hour, he slept again till morning. The next evening I prescribed twenty grains, which produced a seven hours' sleep.

In a case of a girl twenty years old suffering from a complication of diseases, most prominent being mitral stenosis and pain attending acute peritonitis, bromides and morphia produced no sleep, while sulfonal (30 grains) caused an uninterrupted sleep for three hours.

In acute fevers accompanied by insomnia sulfonal has proven itself the remedy par excellence. In a case of typhoid fever twenty grains of sulfonal produced six hours' sleep, two hours after the administration. The patient was unable to sleep for two or three preceding nights and bromides proved of no avail. Dr. Bond[6] (South Liverpool) speaks very highly of its value in typhus fever, saying that it can be given with confi-

[1] New England Medical Monthly.
[2] Dr. W. H. Flint, in Therapeutic Gazette, January, 1890.
[3] Allg. Zeitschrift f. Psychiatric, vol. 47, 1890.
[4] Medical Standard.
[5] Allg. Zeitschrift f. Psychiatric, vol. 47, 1890.
[6] Lancet, Nov. 23, 1890.

dence, avoiding the tendency of other hypnotics such as opiates to cause stupor leading to coma.

Casarilli,[1] who has used sulfonal in diabetes, speaks very favorably of this drug. He found that the quantity of sugar becomes gradually lessened. He noticed no ill effects following the prolonged use of this drug, though long continued use of forty-five grains daily produced lethargy which disappeared on diminishing the dose.

One of the greatest disadvantages of other hypnotics is their tendency to cause gastric disturbances; in sulfonal we have a drug which may be safely administered to combat insomnia arising from gastric diseases. As an hypnotic in alcoholism, drug habits and gastric catarrh it has proven itself superior to any other drug.

It would be well to bear in mind that sulfonal is not an analgesic but a pure hypnotic. It will produce sleep but nothing more, and if it is necessary to obtund pain besides, it should be combined with such drugs as the case may indicate

Sulfonal poisonings have been variously observed, and are generally due to excessive large doses taken with suicidal intent or by mistake. Only one death occurred after its use and this in a case reported by Dr. Knaggs[2] in which the patient took nearly one ounce sulfonal at one dose.

A case from Prof. Lichtheim's clinic (Koenigsberg) of a boy who took fifteen hundred grains with suicidal intent, ended in recovery.

The symptoms of poisoning may be divided into two groups. The first manifest themselves as drowsiness, followed by deep and continued sleep, languor, uncertainty of gait, which may reach paralysis of lower extremities in severe cases, hyperesthesia. The second group consists of symptoms present in severe cases. These symptoms are, firstly, changes in the working of the alimentary tract; second, spinal symptoms. We may find severe anorexia, nausea, vomiting, diarrhœa or constipation, painful urination or paralysis of the bladder. The urine has a peculiar dark red color and acid reaction. Experiments have shown the absence of blood or bile in the urine and the peculiar color is undoubtedly due to some chemical changes of the ingested sulfonal.

With such an addition as sulfonal to our pharmacopœia, drugs like opiates, chloral or bromides, must necessarily disappear from the list of hypnotics. Sulfonal will *never* fail to produce sleep if properly used, and may be recommended to every practitioner as the only reliable and safe hypnotic.

[1] Rivist. gen. ital. di. clin. med., 1889.
[2] Brit. Med. Journal, 1890.

ASHEVILLE, N. C., AND ITS ADVANTAGES AS A CLIMATIC RESORT FOR PHTHISICAL PATIENTS, is the title of an article by Prof. J. W. Gleitsmann, of New York, published in the December number of the New York *Medicinische Monatsschrift.* The writer, considering the essentials of climate for the cure of phthisis, shows that elevation, temperature and humidity are the main factors, and that an elevated resort lying between 2000 and 4000 feet above sea level, with a moderate winter and cool summer temperature, and a relatively dry atmosphere is most desirable. Asheville, N. C., where he has resided for a number of years heretofore, presents such climatic conditions, being there favorable for the entire year. It has an elevation of 2350 feet, is situated in the Alleghany Mountains at their highest point, between the Blue Ridge and the Great Smokies. The whole plateau has excellent drainage, with no marshes or standing water, enjoying entire freedom from malaria. The city itself has been greatly improved in its local sanitary appointments; it has paved streets, good accommodations for tourists and invalids, and there also is located the Winyah Sanitarium, a special institution for diseases of the lungs and throat, in charge of Dr. Karl von Ruck, who is otherwise well known to the profession by his clinical results in phthisis and his contributions to medical literature on this subject.

The climate in winter, while not warm, is not so cold as to interfere with the out-of-door life of patients, and in protected places, during the hours of sunshine, frequently reaches 70° to 80° F.

The average mean temperature is 49° for the winter months. In the summer the place is cool and compares favorably

with any other resort in this country, the highest degree of temperature observed by the writer was 88° F. During the same year, 90°F. were exceeded at forty-seven places in Canada; fifty times at Denver, Col., reaching there 102° F, and thirty-nine times at Colorado Springs, where a maximum of 101°F was observed.

Higher temperatures were also observed at Sandy Hook, New York, etc., and at St. Paul twenty-five times, with a maximum of 99° F. Asheville's average mean summer temperature is, according to Dr. vonRuck, 65° F.

The Asheville plateau, according to the meteorological data given, has an annual precipitation of about forty inches, and the relative humidity is 20° in the winter and 70° in the summer, while the absolute humidity is less than at any point east of the Rocky Mountains, showing the place to have the third requisite, "a dry climate."

Another feature of the Asheville climate is the presence of considerable quantities of ozone in the air; this, in view of the increasing popularity of oxygen as a remedial agent, is particularly interesting. Measurements for the last three years by Dr. von Ruck show an average, ranging from 50 to 75 per cent. of the possible amount, whereas, only five per cent. was found to be present in his observations formerly made in Ohio.

The article concludes with a short consideration of the advantages of institution treatment as compared with sojourn at climatic resorts without the strict care and management which a good institution affords, the author holding that the latter are indispensable to the best results. He says: "It is not a single agent, not even climate, which constitutes a panacea for phthisis, but it is the careful and continued application of a variety of means adapted to the present condition of the individual patient, which promises most. Patients do not, as a rule, know what will benefit or injure them. They need constant care and supervision. The diet must be adapted to their present state of digestion, many, when already on their way to improvement, suffer relapses on account of physical over-exertion. Climate alone protects not against faulty conduct and indiscretions committed, whether the result of ignorance or from want of self-control. Such a detailed oversight which must be extended to the minutest details, is only possible by the physician who has the patient continuously with him, in other words, in a special institution.

A year ago, the author spent several weeks in the institution of Dr. von Ruck, and shows by his description of its location, appointments, and management, that it complies with every essential requirement, and quotes from the *Climatologist* for September, 1891, the clinical results obtained there. Of 605 cases treated, subsequent information as to their condition was received from 457; among these were cured, 67; with the disease permanently arrested, and enjoying good health, 70; materially improved, 258, and grown worse, 62; results which, indeed, speak stronger than any argument in favor of institution management as well as in favor of the advantages of Asheville's climate.

News.

The Alumni Association of the Woman's Hospital will hold their annual meeting at the New York Academy of Medicine, on Tuesday and Wednesday, January 17th and 18th. Dr. John G. Perry, of New York, will be in the chair. The reading of papers will be superseded by the discussion of topics assigned before the meeting. The topics chosen for this meeting are as follows: "Pelvic Adhesions," "The Treatment of Extra-Uterine Pregnancy," "When Should the Parturient Woman be Allowed to Assume the Upright Posture." Dr. Thomas Addis Emmet will read a paper, entitled "The Founders of the Woman's Hospital Association," and Dr. Dudley, of Chicago, will present a new operation for the cure of procidentia. It is impossible to get a good attendance of New York men at a morning session, and in order that this time may be made most interesting to the out-of-town members a number of eminent general surgeons have promised to make special efforts to secure operations on the abdominal viscera to occupy the morning hours. These operations are not frequently seen by gynæcologists, but are of great practical importance to them.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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AFTER ECHOES ON THE CHOLERA.

NOW that the cholera fright has passed over and the fears of a terrified people have been quieted, we venture to ask the question—has there been a single, genuine case of Asiatic Cholera in this country in 1892, and, if so, are there yet, any definite, absolute criteria by which the presence of this malady may be determined either *before* or *after* death?

To the first, we must, after a most rigid scrutiny and analysis of the evidence, answer, first, it is certainly a matter of doubt; and as to the second, we must say, most emphatically, No. This we do with a full appreciation of the venomous anathemas which will be hurled at us from all sides. When we know the truth, however, we speak it, regardless of the consequences.

True, the New Yorkers made a splurge, and pretty well succeeded in throwing the nation into a panic, calling out the troops and blockading the harbor with gun-boats. Professor Herman Biggs submitted a report to the Board of Health, reporting nine deaths from cholera; in six of which, on biological examination, the comma-bacillus of Koch was seen by himself, besides Dr. Loomis, and others. His report to President Wilson intimates that those laboratory-examinations and the recognition of the bacilli saved the nation a great calamity. Let us see what that eminent clinician M. Peter says: Examining the dejecta of twenty-four cases, diagnosed by others as Asiatic-Cholera, Koch's bacillus was found in only three cases. He denies its contagiousness; in the sense of being as virulent as small-pox, scarlet-fever or measles; which, so far, have been found destitute of specific microbes; and declares that he has little faith in those purely Germanized laboratory doctors. This, from one right in the midst, of a sharp epidemic! Bacillary-specificity has had its day, and in cholera particularly, there is not a scintilla of proof, that the germ is anything more than a a secondary product.

This whole germ theory of cholera has recently sustained an annihilating blow, in the experiments which the renowned Pettenkofer, with Emmerich, each performed on his own person. Gaffky of Hamburg sent them fresh cultures of the comma-bacillus, planted from those mortally stricken, in that city.

Two hours after their dinner, each deliberately swallowed a cubic centimetre of the cultures. In each case, the ingestion of the germs in no manner interfered with their habitual regimen; and, except for a moderate transient diarrhea, unattended with colic or vomiting, there were no constitutional disturbances of any kind. In their feces enormous quantities of the comma-bacilli were found. We are aware that Lawson Tait avowed that he would eat all the septic germs

they could bring him, but these latter experimentors backed their words by deeds; and have at the risk of their lives forever settled the question as to the innocuousness of this so-called pathognomonic-pathogenic microbe. Indeed, in France, where the germ theory first saw light, in the late cases of cholera there, it was generally conceded that the so-called Asiatic-cholera there, was nothing more than aggravated cases of cholera-nostras; and that their microscopical elements, the germs of cholerine, cholera-nostras and Asiatic-cholera, were essentially the same. This brings us to the question of quarantine; the discussion of which we will reserve for another number. T. H. M.

In the review of Hansell and Bell's Manual, (Times and Register, December 3, page 616), a sentence quoted from the Manual should read as follows: "The conjunctiva, continuous with the Schneiderian mucous membrane of the nose and the integument of the lids at their free margins, is a mucous membrane composed of columnar epithelium with its basement membrane, and is richly supplied with vessels and nerves." Several printer's errors occurred in the quotation as given, doing the authors an unintended injustice.

Annotations.

A NEW CRANIOLOGICAL INTELLIGENCE INDEX.

Dr. S.V. CLEVENGER, in the Oct. 21 *Science*, suggests that observations be taken upon pharynges to tabulate the angles formed by the basilar process of the occipital bone in correspondence with the intelligence of individuals. He thinks that the same frontal brain growth which lifts the forehead to perpendicularity also presses back upon the medulla oblongata and makes it less horizontal in the scale of animal development, and that by an osseous adaptation the pharyngeal wall also straightens. It is easier to note this in skulls stripped of soft tissues, and a startling truthfulness of the theory was demonstrated by the doctor at the Chicago Academy of Medicine, March 13, 1891, the skulls of many criminals being compared.

TWENTY-FIVE YEARS OF ACTIVE SERVICE IN THE CHARITY HOSPITAL OF NEW ORLEANS, LOUISIANA.

In 1868, Dr. Joseph Jones was elected *Visiting Physician* to the Charity Hospital of New Orleans, and has been annually re-elected to this position.

During this period of 25 years (1868-1893) about fifteen thousand patients have free of charge enjoyed the professional skill and care of Dr. Joseph Jones, and amongst the diseases treated may be mentioned yellow fever, oriental leprosy and Asiatic cholera.

Not less than three thousand medical students have come directly under the instruction of Dr. Jones by the bed-side in the wards of the Charity Hospital.

The original investigations and medical researches of Dr. Joseph Jones have been published in New Orleans, at his own expense and risk, in four volumes: No. 1, relating to Nervous Diseases; No. 2, Yellow Fever, the various forms of Malarial Fevers, Oriental Leprosy, Asiatic Cholera, and other diseases of tropical and semi-tropical climates; Nos. 3 and 4, Insanity, Medical Education, Public and International Hygiene, Quarantine, Contagious Infections, Endemic and Epidemic Diseases.

These volumes were published respectively in 1876, 1887 and 1890, and are contained in about four thousand (4000) closely printed pages.

During the active campaign of twenty-five years, this veteran, whilst achieving no fortune, has not himself escaped the cruel shafts of disease.

Cogswell reports the case of a man who was "crazy drunk," to whom he gave $\frac{1}{20}$ grain apomorphine hypodermatically. Free vomiting ensued, the man slept for some hours and awoke sober. —*Med. Review.*

Letters to the Editor.

TREATMENT OF TUBERCULOSIS.

WHILE I have had a great many cases of tubercular phthisis during the last twenty years, yet I am not well satisfied with my results ; but suppose I have had as good as my brethern, for I get the most of the patients in this vicinity, and have had quite a good many get up and live for years.

My plan is to build up the system by all possible means ; using nourishing diet, of home production as much as possible, for most people relish what is produced under their own supervision rather than something that seems to be in the line of medicine. I change the diet often so as not to tire the palate ; also concentrate as much as is good for the digestive organs, watching carefully that the food is well received, digested and assimilated. I keep every organ in its normal condition, as nearly as possible. I use cod-liver oil often, usually in an emulsion ; I have no preference as to the maker. I have not had good results from malt preparations ; but some will take them with benefit. I do not like alcohol in any form. If there is much cough, I use a white pine expectorant.

As a tonic and food combined, I like the syrup hypophosphites compound. I think we have more trouble from intestinal indigestion, and want of assimilation following, than is commonly understood ; so this should be carefully attended to, or the system rapidly runs down, from want of sufficient food supply; and the germ has a good field in which to develope.

I think your idea in getting out special numbers is a good one ; and I would suggest a number on stomach and intestinal indigestion ; also the bowel troubles of childhood.

O. T. PRATT, M. D.

RIALTO, CAL.

OAKLAND, CALIFORNIA.

LIKE many others, I find the special numbers very interesting and useful. While fully appreciating all the defects of the climate of Oakland I cannot condemn it greatly since my own lung which was not improved by three months of Aiken, two months of Washington, D. C., one of Boston and one of Detroit, has in less than four months of California (Oakland), cleared up very rapidly and it now looks as though all would be as before inside of six months.

W. D. BIDWELL.

I HAVE a few questions to submit to you, being well satisfied that your close observation at the bedside, and large clinical experience, will enable you to speak authoritatively, especially to my own satisfaction.

1. Are compressed tablets and triturates more reliable and soluble, than sugar-coated parvules or dosimetric granules ?

2. Do you regard the administration of compressed tablets, triturates, or dosimetric sugar-coated granules or parvules as reliable for physiological effect, as that of the fluid extracts, tinctures, etc. ?

3. Whose make of fluid extracts and tinctures do you use in private practice ?

4. Whose compressed tablets, triturates do you use ?

5. Whose dosimetric granules do you use ?

6. What has been your observation with digitalis in the second stage of pneumonia ? Does it not cause more blood to be forced into an already overloaded venous system, thereby increasing the danger of heart failure, owing to pulmonary obstruction ?

7. Are not strychnine and nitro-glycerine of more utility, when stimulants are indicated than digitalis ?

Trusting that you will give me your judgement in the same.

M. O. GUNN.

[1. Between compressed tablets, triturates and dosimetric granules, there is no choice; it depends on the manufacturer, not the form.

2. The tablets, granules, etc., are more reliable than the liquid preparations mentioned, when made by responsible houses. The strength of fluid extracts is so variable that no one can safely prescribe them unless he specifies whose make he desires. The use of alkaloids is more precise, more scientific, and requiring more care in diagnosis, is better practice, than that of tinctures and extracts.

3. I employ Parke, Davis & Co.'s normal liquids, Squibb's fluid extracts, or those made by some of our excellent retail pharmacists in Philadelphia.

4. Of triturates, I have used Wyeth's recently and like them ; also Mulford's, with good results.

5. Of dosimetric granules, I use Abbott's, the Philadelphia Dos. Co.'s and the Metric Granules Co's. I am not prepared to express a preference,

nor will I underrate other houses whose goods I have not tried.

6. I have not used digitalis in pneumonia, preferring the combination of phenacetine, quinine and caffeine; with veratrum on one flank and strychnine on the other; with ammonia and camphor for the aged, and hot mush poultices. I would not use digitalis, as it increases arterial tension; but some authors have reported good results in spite of it.—W. F. W.]

READING MEDICAL ASSOCIATION.

AT the last meeting, Dr. F. W. Frankhauser spoke of the unsanitary condition of the public schools of Reading, as described in the report of the Board of Health for 1891; taking up the subjects of ventilation, drainage, plumbing, light, heating, vision, and the condition of the eyes of the children, spinal curvature and the causes of its increase, Drs. Beaver, Weidman, Emmentrout, Loose, Nagle and Rhoades, President of the Board of Health, made some interesting remarks.

A committee consisting of Drs. Frankhauser, Beaver and Nagle were appointed to examine the report of the Board of Health, and make a report to the Board of Control of the city of Reading, asking that a number of changes be immediately made.

The general health of the city of Reading is very good, the death-rate is lower than last year, even with an increase of the population of possibly 5000.

A few cases of typhoid fever, scarlet fever and diphtheria are reported.

A few cases of an endemic form of influenza, have also been found, but there is no epidemic as yet, although the weather has been very favorable for the spread of that disease.

Reading had quite a scare from a family having small-pox about seven miles up the country, several persons have small-pox there but all are improving.

The Reading representative of the State Board of Health corresponded with the attending physician, and gave instructions as to preventing the spread of that unwelcome and dreaded disease. The physicians of Reading, no doubt will shortly inaugurate a crusade of vaccination.

The annual banquet of the Berks County Medical Society is a meeting which very few of the members care to miss, as once a year the profession drop medicine, and for one evening devote themselves to having a good time, during this time business and care is driven from the mind and a flood of joy and mirth flows around the banquet hall. The date has as yet not been fixed; but the committee is making arrangements and early in January the anticipated pleasure will arrive.

F. W. FRANKHAUSER, M. D.

READING, PA.

The Medical Digest.

INDICATIONS FOR THE USE OF LACTIC ACID IN THE DIARRHŒAS OF CHILDREN.—Green stools in children are not always due to the same causes. Some are bilious, others microbic. The first are met with in children from a few days up to two or three months of age. At the time of emission they are yellow, and only become greenish after some time, principally under the influence of light. These are due to bile pigments, as may be readily seen by adding a few drops of nitric acid, when the characteristic color effects appear. The skin, or conjunctiva, is generally tinged in these cases, and the liver enlarged.

The second are frequent after the fourth or fifth month; quite exceptional before that age. They are green, or green and white, mingled with yellow. They have this color when passed, and are not changed by contact with the atmosphere. Nitric acid produces no result, for there are no biliary pigments for it to act on.

Lesage has shown the coloration to be dependent on microbic colonies. These bacili of green diarrhœa are closely related to the rod-shaped bacillus of cholera, and are consequently very dangerous if allowed to proliferate. These are the cases in which lactic acid comes into play, since it immediately kills the bacilli and their spores; on the other hand, in the bilious stools, it is useless, and should not be used, but calomel, soda, etc., substituted.

It is necessary to use lactic acid in large doses, fifteen to twenty grammes in the twenty-four hours, in order to

saturate as far as possible the contents of the intestine.

POISONING BY EXALGINE.—A young man of twenty-three years, very nervous, suffered from toothache. At 2 P. M. he took 30 c. gm (5 grains). The pain was not relieved. So he took two doses more, during the evening. Nine hours later he took a fourth dose. A little later he lost consciousness. There was general cutaneous anesthesia, the cervical muscles were rigid, the pupils dilated, respiration deep, pulse 79. The muscles of the trunk and extremities were flabby, convulsions occurred frequently (general). The patient complained especially of headache; fourteen hours later there was some improvement in the symptoms, but the breathing appeared irregular; general anesthesia persisted, but the pulse continued normal. The treatment consisted in the administration of opium and wine. The inference is that exalgine should be used with caution, and should not be left with patients, to be used by them.

—*La Courier Medicale.*

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"KUMYSS is, among the Nomads, the drink of all children, from the suckling upwards; the refreshment of the old and sick, the nourishment and greatest luxury of every one."—DR. N. F. DAHL'S report to the Russian Government, 1840.

I WOULD also allude to cases of diarrhœa and vomiting and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on KUMYSS, when the improvement was rapid and permanent. Very truly yours,

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The Times and Register.

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Original Articles.

A REPORT OF THE PRESENT STATUS OF THE ELECTROLYTIC METHOD

IN THE TREATMENT OF URETHRAL STRICTURES — WITH STATISTICS OF ONE HUNDRED CASES TREATED BY DR. FRED. S. CROSSFIELD, OF HARTFORD, CONN.

BY ROBERT NEWMAN, M. D.

[Member N. Y. Pathological Society; Consulting Surgeon to Hackensack and Bayonne Hospitals; Consulting Physician to Home for Aged and Infirm, Yonkers; Honorary member Ulster County Medical Society; Honorary member Danbury Medical Society, etc. etc.]

AT the last annual meeting of the American Electro-Therapeutic Association held in New York, October, 1892, the writer presented a statistic of another series of one hundred cases of urethral strictures treated by electrolysis, which with the two series previously reported, and published, make 300 cases in all.

There are no new developments to offer, but the results of the cases now presented confirm former statements, that Electrolysis, scientifically applied, is absolutely successful in the treatment of strictures of the urethra.

Doctor F. S. Crossfield, 47 Pratt street, Hartford, Conn., had the kindness to send me a statistical report of one hundred cases of urethral strictures, treated by him, by electrolysis. The successful result of these cases is so strikingly similar to my own experience, that I take pleasure to annex these statistic tables. I have no personal acquaintance with Dr. Crossfield, we never have seen each other, which circumstance is a proof that our similar statistics are the consequence of personal experience, based on work in the same direction, and on the same scientific principles of natural laws.

Electrolysis rests on fundamental laws of physics and chemistry, so well established that if applied accordingly, failures in the treatment are impossible. In that sense, it is re-asserted that electrolysis *per se, cannot* fail, while it is admitted that ultimate success in a certain case may be prevented in different ways, namely: unforeseen complications; imperfect instruments; negligence of the operator; wrong diagnosis, and the actions of the patient. Failures consequent upon the unskillful manipulation on the part of those who are unqualified, are only the natural effects of causes, and as there exist so many such causes, it is a wonder that more failures have not been recorded. The writer has practised this method of electrolysis successfully for over twenty-three years, and has already described the modus operandi and instruments, and laid down rules minutely for the operation. It is unnecessary, therefore, to recapitulate them; the leading features for the operation being that the constant current of galvanism only must be used,

always applying the negative pole to the seat of the stricture, using only weak currents of from three to five milliamperes, seances lasting not more than from five to ten minutes, with intervals of about one week or longer. Only one instrument should be used at each seance, and the operation ought never to be attempted while the mucous membrane is in a state of inflammation. The patient's strength should not be overtaxed, and gentleness prevail throughout the whole operation. As a matter of course, only the best instruments should be selected and used.

The advantages of electrolysis over other operations is confirmed by the new cases now presented, namely :—

1st. That it is applicable to all strictures in any part of the urethra.

2nd. That it will pass and enlarge any strictures when other instruments or the skill of the surgeon fail.

3rd. That it causes no pain or inconvenience.

4th. It is devoid of danger.

5th. It is not followed by hemorrhage, fever, or any other unpleasant consequence.

6th. It relieves at once.

7th. The patient is not prevented from attending to his business while under treatment, and is without restraint; and,

8th. No relapse takes place.

The electrolytic method may not for some time become so popular that every general practitioner will use it, since it needs beyond skillfulness, great patience, gentle touch, good instruments, and electric apparatus in perfect order, also the qualifications of a master electrician, and genito-urinary expert.

Electricity, and electrolysis in particular, have had many skeptics and adversaries, but who now in this progressive age of science and civilization, have dwindled down to a few unreasoning ones, while the converts are legion ; and the status has changed to a better appreciation of the method now acknowledged as a success, so that scarcely any honest opposition or doubt exists. It seems that the enemies of the system are reduced almost to a single individual, who has resorted to such doubtful and dishonest methods in decrying electrolysis, that it assumes the appearance of personal malice, rather than a truthful and dignified scientific dissent. One of these ingenious methods is to throw doubt upon documentary evidence proving the success of electrolysis. In the year 1885, a physician made a written statement of a case, which was published. With apparent design, after the death of this physician, and a lapse of about four years from the date of the letter, a polite note is written to the physician by a critical adversary, asking him to give the date of the treatment, etc. This polite note, as was expected, was as politely returned to him by the postmaster, who evidently declined to assume the responsibility of forwarding it to its destination ; and the investigator closed his report with the triumphant words, "the inference is obvious." At another time he reports (as his duty as an editor required) some cases treated successfully by electrolysis by an eminent physician in London, ending with the exclamation, "the burning question again!" Such insinuations and misrepresentations must show very clearly on their face, with any "obvious inferences," the unworthy motives of an unsuccessful operator, who, as an editor while reporting successful operations by electrolysis, closes such reports with a caption seemingly intended to be a skeptical and misleading criticism.

But while we have still to contend with this exceptional case of wilful or ignorant misrepresentation, it is a pleasure that the cases which are herewith submitted confirm those already reported, and establish the success of the treatment. This success, summarily, is proved by—

1st. Reports of thousands of successful cases by different trustworthy writers, to which the author has contributed and published three hundred.

2nd. Patients who have, during many years, been observed and re-examined, and can bear testimony of permanent results.

3rd. Acknowledgments by the medical press, journals and modern text-books; and

4th. Documentary evidence, which has never been concealed from those desiring an honest examination, and is always open to inspection, and can be substantiated by reference to most of the patients

themselves, or to their family physician or friends.

It is a pleasure to re-affirm all previous statements heretofore made, despite adverse criticism, and to welcome an investigation of stubborn facts which do not yield to "obvious inferences," but whose convincing truth is established by honest, careful and judicious investigation.

The additional 100 cases annexed here came just opportunely and in sending the report to me, Dr. F. S. Crossfield writes as follows:

"I have practiced electrolysis for the treatment of stricture of the urethra upwards of eight years with success. My synopsis of one hundred cases and observations coincides with the published statistics of Dr. Robert Newman, of New York. My cases were all seen in private practice. Those reported here were not selected cases, but taken in order of occurrence. Many cases reported improved, but not cured, could have been made so, had the patient carried out instructions, and continued treatment; others moved away, and were lost sight of. Taking the cases as a whole, together with those of Dr. Newman, it establishes the practical value of the method."

No.	Patient's Initials. Date of First Visit.	Age.	Cause, Duration, Complications.	No. Strictures Found.	Distances from Meatus. Inches.	Size Stricture. Fr. Scale.	Treatment. How Many Séances.	Treatment. Average Intervals. Days.	Treatment. Time of	Sequel, Calibre Urethra when Disch'g'd. Fr. Scale.	Last Heard From.	Time of Observat'n after Discharge. YRS.	MOS.
1	C. H. S., Apl, '86	58	Gonorrhœa 30 yrs	2	5, 7,	16	8	14	6 m'o's	30	September, '92	6½	
2	F. W., Apl, '86	23	" 3 "	1	4,	8	4	7	6 w'k's	18	April, '89	3	
3	H. P., Jr., Oct, '86	24	" 5 "	1	3,	6	5	10	8 "	20	November, '88	2	
4	J. E. S., Jan, '86	17	" 2 "	1	3,	9	4	10	1½m'o's	21	January, '87	1	
5	S. A. C., Jan, '86	26	" 7 mo	2	2, 5,	12	6	14	3 "	20	December, '86		11
6	C. F. S., Jan, '86	18	" 1 yrs	1	5,	Nil.	5	14	2½ "	18	April, '87		15
7	R. E D., Jan, '86	34	" 2½ "	1	4,	6	3	14	2 "	23	January, '87		12
8	J. N. W., Jan, '86	27	" cystitis 3 "	3	1,3,4½	7	8	10	3 "	20	Improved.		
9	O. R. S., Jan, '86	29	" 1 "	2	4,	11	4	10	2 "	30	January, '86	3	
10	J. L., Jan, '86	31	" 4 "	1	5,	12	5	14	2½ "	18	July, '87	1½	
11	A. O. P., Feb, '86	19	" 2 "	1	4,	0	4	14	2 "	27	April, '87		14
12	A. D. R., Feb, '86	42	" 13 mo	1	2,	6	6	14	3 "	24	January, '90	4	
13	H. E. B., Feb, '86	38	" 1 yrs	2	1, 5,	9	7	14	4 "	18	September, '87		19
14	D. E. S., Feb, '86	18	" orchitis	1	3,	12	5	10	2½ "	26	December, '90	4½	
15	A. E. P., Feb, 86	27	" 5 "	3	2,3½,5	8	10	10	4 "	18	Died, Bright's		
16	A. D. S., Feb, '86	64	Excesses 5 "	1	6,	11	7	14	3½ "	21	August, '86	Lost sight of	
17	F. M. W., Mar, '86	27	Gonorrhœa 12 "	1	4,	11	5	14	3 "	29	January, '87		10
18	C. D. F., Mar, '86	19	" 2 "	1	2.	0	8	14	4 "	24	August, '86	Left town.	
19	W. H. R., Mar, '86	20	" cystitis 3 "	2	3, 4,	12	8	10	3 "	18	August, '89	3	4
20	R. W. F., Mar, '86	34	" 1 "	1	5,	8	6	10	2½ "	21	May, '89	3	2
21	Jos. K., Mar, '86	48	" 7 "	1	3,	6	4	10	2 "	30	January, '90	3	10
22	F. P., Mar, '86	56	Unknown 3 "	3	2, 4, 6,	11	5	14	3 "	17	July, '92	Improved.	
23	E. P. R., Mar, '86	23	Gonorrhœa 1 "	2	3, 5,	14	6	14	3 "	20	April, '91	Improved.	
24	Nat'l B., Mar, '86	29	" 3 "	1	6,	12	3	14	2½ "	26	July, '92	6	4
25	P. H., Mar, '86	35	" 2 "	1	4,	18	4	14	2½ "	23	August, '91	5	5
26	C. P. W., Apl, '86	28	" 2 "	1	5,	0	7	14	4 "	18	January, '90	3	9
27	W. E. S., Apl, '86	60	" 1 "	1	3,	6	4	10	2 "	20	April, '88	2	
28	C. A. S., May, '86	50	" 18 mo	2	3, 4,	20	6	12	3 "	15	September, '86	L'st sight of	
29	C. W. M., May, '86	42	" 1 yrs	1	2,	18	5	10	2½ "	30	September, '89	3	4
30	G. W. W., May, '86	23	" 5 "	1	6,	11	5	14	2½ "	26	March, '91	4	10
31	C. S., May, '86	27	"orchitis 2 "	1	4,	6	4	12	2 "	20	August, '92	6	3
32	C. C. T., June, '86	33	" 10 "	3	3,4½,6	12	7	14	3½ "	18	October, '86	Died, some acute dis'se	
33	H. S., June, '86	62	" 12 "	1	5,	17	4	14	2 "	21	May, '88	1	11
34	D. N. H., June, '86	59	"u'k'wn time	2	2, 3,	20	8	14	4 "	24	August, '89	3	2
35	R. C., July, '86	49	" 7 "	1	2,	21	7	14	3½ "	29	April, '91	4	9
36	H. A. D., July, '86	22	" 9 mo	1	5,	11	3	14	2½ "	23	September, '92	6	2
37	G. K., Aug, '86	33	" 2 yrs	1	3,	20	5	10	2 "	26	April, '90	3	8
38	H. H. H., Aug, '86	39	" 5 "	1	5,	6	6	12	3 "	18	December, '89	3	4
39	J. B., Aug, 86	51	" 10 "	1	4,	8	4	10	2 "	23	September, '89	3	
40	A. P. Y., Sept, '86	29	" 1 "	2	2, 7,	12	7	14	3½ "	21	July, '88	1	10
41	G. F. S., Sept, '86	30	"cystitis 3 "	1	6½,	11	7	14	3 "	17	October, '90	4	
42	F. E. R., Oct, '86	34	" 7 "	1	4,	14	4	14	2½ "	30	June, '90	3	8
43	R. O. E., Oct, '86	19	" 1 "	1	5,	11	5	14	3 "	26	April, '92	5½	
44	C. E. P., Oct, '86	58	" 15 "	2	2, 7,	12	7	10	3 "	21	July, '89	2	9
45	A. D. M., Nov, '86	27	" 9 mo	1	6,	20	4	10	2 "	29	July, '91	4	8
46	C. R. S., Nov, '86	64	" 30 yrs	3	2, 4, 5,	8	10	14	5 "	18	April, '90	3	5
47	G. A. R., Nov, '86	25	" 6 "	1	3,	0	5	14	3 "	27	October, '92	5	11
48	C. C. C., Oct, '86	47	" 12 "	3	3, 4, 6,	8	10	14	6 "	15	May, '88	Improved.	
49	G. W. W., Nov, '86	68	" 25 "	1	6,	12	7	10	2½ "	18	June, '88	1	7
50	N. B., Dec, '86	56	"prostatis 15"	2	4, 6,	8	4	14	2 "	24	December, '89	3	
51	W. E. P., Dec, '86	35	" 6 "	1	4,	12	6	10	2 "	30	January, '91	5	
52	H. H., Dec, '86	61	" 17 "	2	1½, 5,	11	10	14	5½ "	17	May, '88	1½	

No.	Patient's Initials. Date of First Visit.	Age.	Cause, Duration, Complications.	No. Strictures Found.	Distance from Meatus. Inches.	Size Stricture. Fr. Scale.	Treatment. How Many Seances	Treatment. Average Intervals, Days.	Treatment. Time of	Sequel, Calibre Urethra when Discharged. Fr. Scale.	Last Heard From.	Time of Observation after Discharge. Yrs.	Mos.
53	J. S., Dec, '86	49	" 5 "	1	6,	9	5	14	2 "	15	Not h'rd from.		
54	D. L. A., Dec, '86	45	" 3 "	2	2, 5,	12	6	14	3 "	15	Died, Bright's		
55	A. H., Dec, '86	69	"excess's 20"	1	4,	8	4	10	1½ "	18	December, '88	2	
56	C. C. B., Mar, '87	23	" 1 "	1	3,	13	4	12	1½ "	18	March, '89	2	
57	W. R. W., Mar, '87	61	"u'k'wn time	2	1½ 4,	8	4	14	2 "	14	Not h'rd from.		
58	G. F. R., May, '87	28	" 3 "	2	2, 4,	11	8	14	4 "	21	November, '89	2½	
59	J. O. P., May, '87	67	Gleet excess's 30"	3	1, 3, 5,	12	6	14	6 "	14	Improved.	Mov'd aw'y	
60	H. M. W., May, '87	25	Gonorrhœa 1 yrs	2	1½, 5,	12	6	14	3 "	20	September, '89	2	4
61	M. W. S., May, '87	26	" 2 "	2	1, 5½,	11	9	10	3 "	19	February, '90	2	9
62	L. A. C., June, '87	45	" 7 "	1	6,	6	5	14	2½ "	18	January, '90	2	7
63	C. B. L., June, '87	26	" 14 mo	1	3,	12	4	14	2 "	20	January, '89	Died Consumption	
64	E. S. Y., June, '87	34	" 2 yrs	1	4,	7	6	14	3 "	16	October, '89	2	4
65	M. H., June, '87	48	" 3 "	1	6,	9	6	14	3 "	18	July, 89	2	
66	S. F. S., June, '87	29	" 13 mo	2	2, 5,	11	6	8	2 "	16	September, '90	3	3
67	C. C. G., June, '87	34	" 5 yrs	1	3,	12	8	14	4 "	18	September, '89	2	3
68	U. D. A., July, '87	27	" 2 "	1	4,	9	2	14	1 "	18	Left town.		
69	S. F. A., Aug, '87	25	" 9 mo	1	5,	11	6	10	2 "	15	August, '89	2	
70	I. N. T., Sept, '87	29	" 2 yrs	1	6,	12	6	14	3 "	20	November, '88	1	2
71	C. S. R., Sepl, '87	26	" 3 "	1	4,	12	6	10	2 "	18	September, '90	3	
72	H. W. M., Sept, '87	19	" 18 mo	1	6,	12	4	14	2 "	20	October, '91	4	
73	G. C. McL, Sept, '87	23	" 16 "	2	2, 5,	0	4	14	2 "	17	March, '90	2½	
74	A. W. R., Oct, '87	30	" 2 yrs	1	5,	9	3	14	1½ "	15	{ January, '90	2	3
75	N. F. W., Nov, '87	46	fell on Perineum 3 "	1	7,	0	10	14	5 "	9	{ Improved. Not h'rd from.	Dissipated.	
76	Wm. H., Jan, '88	34	Gonorrhœa 6 "	1	5,	9	5	10	2 "	15	Well, Feb, '89	1	
77	Wm. O'B., Jan, '88	27	" 1 "	1	4,	9	6	10	2 "	14	February, ,90	2	1
78	C. G., Feb, '88	28	" 2½ "	1	4,	11	4	14	2 "	17	January, '91	2	11
79	E. M. D., Feb, '88	42	"syphtlis 7 "	1	6,	8	10	14	5 "	17	September, '91	Died Pneumonia.	
80	E. M. F., Mch, '88	27	" 1 "	2	2, 6,	12	4	10	1½ "	18	January, '92	3	10
81	E. A. E., May, '88	19	" 8 mo	1	1,	11	7	14	3 "	19	August, '90	2	3
82	G. A. F., June, '88	52	" 15 yrs	2	4, 7,	8	8	14	4 "	20	November, '90	2	5
83	C. E. H., Sept, '88	56	"cystitis 20 "	3	4, 5, 6,	8	10	14	4 "	18	November, '92	4	2
84	E. D. R., Oct, '88	26	" 1 "	1	4,	12	6	14	3 "	20	November, '91	3	1
85	L. L. E., Oct, '88	48	" 10 "	1	7,	12	5	20	3½ "	20	January, '92	3	3
86	F. H. C., Nov, '88	28	" 14 mo	1	6,	11	4	30	4 "	23	August, '91	2	9
87	O. M. C., Nov, '88	39	" 1 yrs	1	3,	9	6	10	2 "	19	November, '90	2	
88	J. A. B., Dec, '88	24	" 9 mo	1	5,	12	5	10	2 "	20	February, '91	2	2
89	L. L. L., Dec, '88	54	" 17 yrs	1	5,	9	4	14	2 "	14	April, '89 Died, Cons'p'n.		
90	W. S. C., Dec, '88	24	" gleet 1½ "	1	4,	9	3	14	1½ "	17	January, '90	1	1
91	W. E. S., Jan, '89	35	Traumatism 7 "	1	5,	14	4	10	1½ "	20	August, '90	1	7
92	W. S. N., Feb, '89	27	Gonorrhœa 1 "	3	1, 4, 6,	8	10	14	5 "	18	February, '91	2	
93	J. H. D., Mch, '89	29	" 15 mo	1	5,	12	5	14	2 "	24	March, '90	1	
94	W. J. B., Apl, '89	25	" 2 yrs	1	3,	11	6	14	3 "	23	October, '91	2	6
95	J. R., Aug, '89	48	" 7 "	1	5,	12	4	10	1½ "	20	February, '92	2	6
96	J. O. B., Aug, '89	27	"cystitis 2 "	1	6,	9	8	14	4 "	20	August, '91	2	
97	M. M., Sept, '89	28	" 2 "	3	2, 4, 7,	0	12	14	6 "	17	April, '90	Left town.	
98	A. C. W., Dec, '89	32	"syphilis orchitis 5 "	2	3, 5,	11	6	10	2 "	18	October, '92	1	10
99	A.H.McD., Jan, '90	29	" 3 "	2	4, 5½,	11	4	14	2 "	17	September, '92	1	8
100	E. T. L., Jan. '90	30	Traumatism 2½ "	1	6½,	12	3	14	1½ "	15	Left town.		

SUMMARY.

The result of the treatment is noted under the heading, "Sequels, and Calibre of the Urethra When Discharged." The number of the electrode used is stated according to the French scale.

The enlargement of the calibre of the urethra by the electrolytic treatment:

Strictures which admitted no instrument were enlarged from No. 17 to 27 resp.

Strictures which admitted a No. 4 instrument were enlarged from No. 14 to 29 resp.

Strictures which admitted a No. 6 instrument were enlarged from No. 18 to 30 resp.

Strictures which admitted a No. 7 instrument were enlarged from No. 16 to 20 resp.

Strictures which admitted a No. 8 instrument were enlarged from No. 17 to 24 resp.

Strictures which admitted a No. 9 instrument were enlarged from No. 14 to 21 resp.

Strictures which admitted a No. 11 instrument were enlarged from No. 15 to 30 resp.

Strictures which admitted a No. 12 instrument were enlarged from No. 15 to 30 resp.

Strictures which admitted a No. 13 instrument were enlarged to No. 18.

Strictures which admitted a No. 14 instrument were enlarged from No. 20 to 30 resp.

Strictures which admitted a No. 15 instrument were enlarged to No. 30.

Strictures which admitted a No. 17 instrument were enlarged to No. 21.

Strictures which admitted a No. 18 instrument were enlarged from No. 23 to 30 resp.

Strictures which admitted a No. 20 instrument were enlarged from No. 24 to 29 resp.

Strictures which admitted a No. 21 instrument were enlarged to No. 29.

The duration of the strictures at the time the patients presented themselves for treatment, varied from seven months to thirty years, as follows: Three cases of seven months' standing; four cases of nine months; twenty-two cases of one year; twenty cases of two years; thirteen cases of three years; three cases of four years; eight cases of five years; one case of six years; six cases of seven years; three cases of ten years; three cases of twelve years; three cases of fifteen years; two cases of seventeen years; three cases of twenty years; one case of twenty-four years; three cases of thirty years.

Percentage of single and multiple strictures: Single strictures, 66; multiple strictures, 34; total strictures in 100 patients, 143.

The *number of strictures* in one individual were: One stricture in 66 cases; two strictures in 24 cases; three strictures in 10 cases.

The location of the stricture was found in all parts of the urethra, from the meatus to more than seven inches from it as follows:

At 1 inch or less than 2 inches from meatus, 9.
At 2 inches or less than 3 inches from meatus, 17.
At 3 inches or less than 4 inches from meatus, 22.
At 4 inches or less than 5 inches from meatus, 34.
At 5 inches or less than 6 inches from meatus, 31.
At 6 inches or less than 7 inches from meatus, 21.
At 7 inches or less than 8 inches from meatus, 7.

Situation—The greatest number of strictures were from four to six inches from the meatus.

The length of time patients were under observation after treatment, varies from eleven months to 6½ years. The average time in this hundred cases was three years without the occurrence of a relapse.

NEW YORK, January, 1893.

THE ELECTRICAL TREATMENT OF STRICTURES.

By W. H. WALLING, M. D.

ESOPHAGEAL STRICTURE.

HAVING located and determined the calibre of the stricture, a suitable electrode, a little larger than the one that will pass, is dipped in carbolized glycerine and placed in position, and the stricture is acted upon with the negative galvanic current. The other pole may be placed at any convenient place. A current strength of from five to twenty-five milliamperes may be used, according to the size of the electrode; the smaller the instrument, the weaker in proportion should be the current. If the stricture is of great extent, it will be better not to attempt to pass the electrode entirely through it at the first, and possibly the second, or even third sitting. Once through, however, subsequent operations should involve the whole tract. Great caution is to be observed in treating this locality, in order to avoid making a false passage. Very gentle force should be used during the preliminary examination, as well as in subsequent operations, up to the point of fully passing through the obstruction, and into the stomach.

Organic stricture must be carefully differentiated from hysterical simulation. A case came under my observation, some years ago, at the Polyclinic, in this city, where no stricture could be detected, although the patient stoutly insisted that there was one, and daily passed a good-sized bougie well into the stomach. In fact, he almost swallowed the whole of the instrument. The distal end must have reached nearly, if not quite, to the pylorus. As he could not be convinced that there was no obstruction, he continued to use his "supposed dilator."

Frequency of applications depends somewhat upon the intensity of the current used; if strong, say 20 to 25 ma. once a week, will be quite sufficient.

Objection has been made to this method of treatment on account of the near proximity of the pneumogastric nerve, but no unfavorable symptoms have occurred in any case under my own observation or treatment and I have seen none reported.

STENOSIS OF NASAL DUCT.

The writer has repeatedly urged electrolysis in the plan of dilatation by means of lead bougies left in situ. The lead bougie itself, properly insulated, would make an excellent electrode. Cocaine could be used previously if desired. Five ma. of current or even less would be sufficient.

CERVICAL STENOSIS.

This condition may or may not be classed as a stricture, but as cathodal

applications with olive tipped, insulated bougies are indicated, the condition may at least be alluded to. In many cases of dysmenorrhœa, electrolysis of the cervical canal will entirely overcome the difficulty.

STRICTURE OF THE RECTUM.

Having ascertained the size and extent of the stricture as nearly as possible, both by digital examination and with rectal bougies, proceed as in other strictures, to overcome it by the negative galvanic current. In some extreme conditions it may be impossible to insert even the smallest rectal bougie. In such case use whatever properly constructed instrument can be inserted, an urethral bougie for instance. For this purpose soften the hard rubber insulation over a mild flame or in hot water, and straighten the instrument as desired.

Having selected and inserted the size indicated, and attachments being made, turn on fifteen to twenty-five ma. of current, and go through the obstruction with a very gentle force. Having passed it draw the instrument slowly back through the stricture. The whole sitting may occupy ten minutes or more. If the stricture be very dense and extensive, it may not be practicable to pass the electrode entirely through it. This may take two or more sittings, but once through, bring the instrument back to normal tissue with the current still on, thus again acting upon the entire extent of the obstrution.

It should be borne in mind that we are now dealing with organic strictures, cicatricial tissue, or fibrous bands, not neoplastic growths. The latter demand an entirely different line of treatment.

Electrolysis of rectal strictures may be repeated every five to seven days, according to the current strength used, and the length of the sitting. Of course, larger and larger instruments should be used as the case progresses, until the lumen of the gut is of the desired size, or a satisfactory result reached.

STRICTURE OF THE URETHRA.

The first step in treatment is to locate and measure the obstruction and to ascertain whether there be more than one. Having done this, proceed as in other strictures, to reduce it, or them by means of the negative galvanic current. We may not use so strong a current here, as in the rectum, five to ten ma. being sufficient. The indifferent electrode being in position, and the proper sized olive tipped, insulated bougie in readiness, dip the latter in carbolized glycerine, insert it to the stricture, turn on five ma. of current, and make very gentle pressure.

Most operators say, "Use no pressure whatever," but I have always used a little, it must be done, or you will act only upon one spot, and make no progress. Pass through the stricture if possible, return the instrument gently with the current still on, and then shut off the current and withdraw the electrode completely. It is better not to repeat the operation at the same sitting, but allow from three to five or more days between operations.

In selecting an instrument, always take one that is about two sizes larger than one that will readily pass the obstruction.

Linear electrolysis, or as I suppose, using an electrode with an acute edge, instead of a full bulb, has been practised and praised. Never having used the method, I cannot speak from experience regarding it. Theoretically I see no advantages over the older method. In fact I should prefer a full bulb, as it acts upon the whole surface at once, and as the process is an electrolytic one purely, the bulb electrode meets the requirements admirably. It is not within the province of this paper to go into the pathology or the etiology of strictures. These subjects are discussed thoroughly in the text-books, to which the reader is referred. I will say, however, that in my judgment the term "spasmodic stricture" should never be used. A spasm is not a stricture in the proper sense of the term in connection with electrolysis. Such a condition demands entirely different treatment. Reports of cases are also omitted as space does not permit.

The success that has attended the proper application of the galvanic cathode to organic strictures wherever located, has placed this method far in advance of the severe surgical, and uncertain dilatation procedures of the old school of surgeons. I could no more go back

to such old and barbarous methods, than I could resort to the still older plan of administering "ten and ten," with which I was familiar years ago. Ten grains of calomel and ten grains of jalap were then the regulation dose, popularly termed "gallop and trot." The combination did not belie its name.

Thanks to the advancement of science, *Electricity* and *Dosimetry*, twin sisters in higher medication, are now rapidly replacing the crude and uncertain methods of our fathers.

1606 Green Street Philadelphia Pa.

ELECTROLYSIS FOR URETHRAL STRICTURE.

By F. H. WALLACE, A. M., M. D.

[Member Mass. Medical Society and American Electro-Therapeutic Association.]

SUCH a wordy warfare has been waged over the treatment of strictures of the male urethra, so much has been written both pro and con, since Dr. Newman first advocated kathodal electricity in their resolution, and so many learned urinary surgeons have condemned the operation as futile and a useless waste of time, that it seems presumptuous to dare to assert *that* SOME cases can be cured by this method: but I cannot refrain from speaking out in favor of an operation which has proved so generally successful in my practice.

The only valid objection I have heard urged against the operation is that it is useless and a waste of time, (the objection that "it will cause a cicatrix" can only occur by unskillful use of electricity); while, per contra, I think with justice we can claim at least five points in its favor.

1st. Avoidance of an operation under ether, which is not always unattended by harmful results.

2d. Patient can attend to daily duties, not being detained in treatment over ten minutes.

3d. No fever caused by the operation, as I have never had any untoward results in all my cases.

4th. No pain.

5th. Cure of accompanying gleet, which is not always accomplished in divulsions.

Now all will admit that electricity will cause the absolute disappearance of what Zeigler classes an analogous pathological formation, (I refer to fleshy escrescences on the skin), without leaving an ocular vestige on their former site.

Why then should we hesitate to acknowledge that stricture can be removed by identical means?

I claim that in the treatment of stricture by this therapeutic agent we must allow the same time and use the same care that we adopt in the removal of their analogue, for it is a common observation, in the use of electricity, that we see curative results, which we initiate, go on long after we leave off the treatment of a patient.

Another item of value, is *too* mild dosage, for patients vary much in their ability to bear electricity; and so I use it to the point of causing absolute discomfort.

When I first began to use electricity I erred in the too frequent repetition of the application, and to a certain extent defeated the object I wished to attain; that is, every second or third day I found injurious, and so for the last four (4) years adopted a period of ten to fourteen days between treatments as the most satisfactory. I will here present a case to illustrate the folly of frequent repetition. Mr. J. S., age 24, teamster, was sent to me by a druggist, who had been treating him for gleet for some three months, with no material benefit. On inspection found phimosis and a very profuse discharge of muco-pus. On sounding found two inches from meatus an annular stricture admitting only No. 17 French, one inch farther found another of No. 17 French. At patient's solicitation I treated him every other day to hasten a cure ; with kathodal electricity 5 mil. amp. 3 minute seances. At the end of second week I found I had gained but two m. m., but the gleet was cured so far as I could see. But the patient became impatient and went to Mass. Gen. Hospital for divulsion, with what result I am unable to say. While I treated him I operated on the phimosis, the cure of which and the gleet I could credit myself with. From that time, which was Nov., 1888, I have always insisted that a patient should be under my care at the very least three months, as the sole con-

dition on which I would undertake the treatment, and I can frankly say I have not been disappointed in results. A case in point:

Mr. H. J., referred to me by Dr. Colman, of Lynn, in 1890, as one suitable for electrolysis. Age of patient 42, merchant, history of four attacks of gonorrhœa, the last in 1888, from which he had not entirely recovered, having a persistent gleet and some inability to urinate freely. On sounding, found only one stricture about two and a-half inches from the meatus, but the entire urethra was exceedingly sensitive. I used kathodal electricity (electrode No. 15, French), as strong as he could bear for five minutes, and ordered him to return in ten days. At that time, gleet less, not so sensitive, admitted No. 17 easily. I repeated the treatment at intervals of ten to fourteen days, until I had treated him eight (8) times, when I found gleet gone, not sensitive to passage of electrode into the bladder and the urethra admitted No. 31 easily; and to-day, January 11, 1893, I had the opportunity to examine and found no return of any of the former symptoms.

These two cases will illustrate the futility of assuring a patient of rapid results on the one hand, and on the other will give us the pleasure of confidence in a treatment, which deserves all that can be said in its behalf. In this paper I have taken for granted that our readers are familiar with all the minutiæ of batteries, method of treatment, and proper electrodes, and also I have simply spoken of the hard, resilient strictures, and not those of a spasmodic character, or what has been termed membranous of crescentic shape, in which I have used anodal electricity with brilliant results in many cases.

ELECTRO-URETHRAL SURGERY.

By WILLIAM F. HUTCHINSON, A. M., M. D.

[Vice-Pres. Am. Electro-Therapeutic Association.—Fellow Societé Electro-Therapeutique Francaise, etc., etc.]

THE operation for radical cure of urethral stricture by electricity has now become standard, and is generally adopted wherever a specialist in electrical surgery can be reached.

It has been violently opposed, its rationale disputed, and its results denied only by a few men, whose ignorance of electrical law and electrical technique is equal to their genius for finding mare's nests of enormous proportions. Exactly in the ratio in which insensate opposition was borne down by reason and experiment, did this operation grow in favor, until to-day its popularity is only limited to the small number of experts whose technical knowledge and manual skill warrant them in expecting constant good results.

Since our number of THE TIMES AND REGISTER is given up to consideration of this item of surgery, I shall leave its history to another. It has already attained respectable age, for since I saw Mallet at work at Tripier's clinique, in Rue Louis le Grand, a quarter of a century has passed, and he was not the first.

In this country, Dr. Robert Newman, of New York, and myself, conceived, or rather performed, the present operation at about the same time with success; but to my friend Newman the great part of whatever standing the procedure has gained is chiefly due. His steady enthusiasm, careful book-keeping, and wide opportunities as dispensary surgeon, soon threw my modest list into the rear, and I am glad to allow to him just precedence.

Yet something has been done here. During the last three years, my note book gives eighteen cases with uniform good results. That is to say, all were made better, two were permanently cured by a single operation, if there is any such thing as permanence in cure of urethral stricture; twelve were obliged to return for second and third applications of the current, after which they had no further trouble, and four are still with me. These eighteen cases were selected from fifty-one sent for operation, and were all that I deemed best to take. They presented typical, or nearly so, specimens of fibrous stenosis, were phlegmatic, not easily excited men of good general health, and had all tried various other methods of cure without avail.

The plan pursued at my rooms is as follows: All instruments are carefully sterilized in hot solution of corrosive sublimate, 1 to 1000, and placed in a basin of warm carbolized oil, comprising a full

set of olive tipped, hard rubber insulated bougies, with French numbers marked on electrical catches at distal end, and a meatus measure. They range from 11 to 33 of the scale, no larger nor any smaller having been needed, and I find that the usual sizes employed are between 24 and 31.

My patient comes in at nine in the morning, and sits quietly down while things are being gotten ready, watching arrangements and asking all manner of questions. At a quarter past, he stands before me, the body bare from waist to knees, and I inject the urethra full of an aqueous solution of thymol 1 to 50.

The negative pole of an Edison Lalande galvanic series is clamped in a catch of proper size bougie, determined by careful measure to flexible cord, and positive attached to a carbon disk, covered with absorbent cotton well wetted with a hot solution of iodic carbonate tightly held in hand. An experimental trial of sensitiveness of membrane is made by closing circuit through urethra to hand, and measuring just enough current with ammeter until a distinct sense of warmth is experienced, pleasant rather than disturbing. The current is then switched off and operation proper commenced. The bougie point is carried to stricture, where it brings up sharply, and is held against the resistance steadily, but with no more force than is needed to retain it in position. The same measured ampereage is at once switched on, and, in a space of time, varying from four to ten minutes, the bougie point sinks into the obstruction with a feeling as if it were penetrating rather stiff mud. Manual pressure is promptly relaxed and the instrument slowly wins its way through, painlessly, and unaided by the operator's muscle, usually finishing the new route with a little jump. Current is then turned off, bougie passed into bladder to make sure of a clear way on, and the little operation is done.

Patient adjusts clothing, pays bill and leaves content. This is all there is of the procedure. I have never had urethral fever nor pain afterwards, rarely had reappearance of the disease and believe that it is, for selected cases, the only civilized way of treating it.

Within a week, I have heard from a man upon whom I operated sixteen years ago, with number twenty-seven French, where number eleven could not be passed uncharged, who tells me that he has not since had any obstruction whatever.

I believe that more different kinds of results have been reached in this small thing than in any other surgical addendum that I know. Last week I received a letter from an Atlanta doctor, complaining that his galvanic battery wouldn't do in stricture although it had a very fine coil; that it almost killed his patient. Probably.

Another writes from Spokane Falls to say that his dry cell machine seems to be uncertain; has current enough at one time and none at another. I tell him to set it one side and get a couple of dozen Edison Lalande cells, charge them himself, go over them once a month and he will be ready for anything that urethral surgery calls for.

General practitioners rarely succeed well with any form of electrical service. Expecting that they can obtain from expensive instruments and gorgeous outfit the results that they read of in medical journals, they fail to reckon the years of careful study of electro-physics and constant practice of therapeutical currents of electricity that give a specialist his success, and so are disappointed. Next, these pretty cabinets, resenting steady disuse, grow poor in connection, or a wire is bodily eaten off; and time is too valuable to use in trying to repair an unfamiliar machine when old friend instruments are close at hand.

Electro-medical treatment is still more annoying to them, for it is slow, painstaking and long-continued, and it would be a wonder if their patience did not always, in place of sometimes, give out before the seductions of swift acting, independent drugs.

But in New England, at least, I have always found my colleagues courteous gentlemen, anxious to hear and see all they can of electro-therapeutics and surgery, willing to refer cases to me for special treatment, and appreciative of good work done.

As I have said elsewhere and often, electricity neither is nor at present promises to become a panacea. Its limits in medicine and surgery are comparatively

narrow and are not, in my experience, materially extending.

Yet, within these bounds, there are many things that can be better done by electrical aid than in any other way, and some, among them the cure of urethral stricture, which no other form of force, however deftly exercised, is worth mentioning in the same day beside.

ELECTRICITY IN STRICTURES.

By WILLIAM R. D. BLACKWOOD, M. D.

PHILADELPHIA.

I HAVE been using electrolysis in strictures of many varieties for twenty-five years—long before others reported their results. In making this statement I have no desire to claim that I am the discoverer of the method, for I believe that electricity was used in many departments of medicine and surgery empirically by charlatans when the regular profession was vapidly sneering at the supposed quackery thus displayed, just as it did in the line of the so-called "injection" method of treating hemorrhoids—the "injectors" all the while curing thousands of sufferers, specially out west.

My attention was called to the probable utility of electricity in stricture because it seemed such a good agent in reducing any form of muscular spasm, and it was in a case of spasmodic stricture of the female urethra that I first tried the method; and that plan then proved satisfactory, so much so, that I extended the method to the more common instances in the male victims. The prime difficulty at first was to secure a steady battery-current, and many of the failures now reported are due to this matter, for it is essential that the flow of force be absolutely direct and even in its nature; it won't do to have the current exert its power in jerks and jumps else the spasms (if such exist in the poor penitent) will be intensified, or produced if they do not. Then, again, the amount of force needed was unknown, and we were working largely in the dark for a long time; this caused many people to object to the method for the very proper reason that they suffered enough from what they already had without having new terrors thrust upon them—or, more correctly speaking—into them. A galvanic burn is very hard to heal anywhere, and quite painful everywhere; I suppose it is just as bad in the urethra, and I know it is bad enough in the throat from personal experience. To prevent my readers from imagining that I had strictures in my esophagus, or thereabouts, I may state that the burns were experimentally received through trying the effect of electricity on herpetic blisters due to disordered stomach, this being in turn due to my indulgence in chicken-salad made from fowls with four legs, such as caterers shove on confiding patrons—to wit—what the Johnny Bulls term "weal." It was at a medical reception, too, which made the affront all the more disreputable.

After considerable experience, I got the hang of the business enough to make me feel that there was something in it, and much more so than some of my confreres were willing to accept, all of which did me no harm, for many a patient has come to me for trial of the plan after standing all that he could in the way of forcible bougieing, stretching, or sometimes cutting at the hands of my critics, and some of the best illustrations of the utility of electrolysis have followed in these instances.

In my opinion, almost any stricture can be certainly cured by electrolysis, with possibly the exclusion of those which are distinctly cartilaginous from age or mismanagement. Even a mass of gristle can be broken down, if time and patience is attainable, by persistent and thorough electrolysis. The best results, however, follow the early trial of the method after a stricture is found to exist. Most of the cases coming under my notice have been sequent to gonorrhœa, but some have undoubtedly had their genesis in masturbation; this, I think, was first brought to the attention of the profession by the late Samuel W. Gross, who worked the subject up very thoroughly. Others were dependent, so far as I could detect, on neither specific inflammation of the tract, or the effect of self-abuse. I don't see why stricture of the urethra cannot arise aside from such causes, any more than narrowing of the calibre of any other duct can—for instance, the lachrymal canal: this drainage tube undoubtedly becomes

too contracted to do its work at times, without there being any antecedent inflammatory provocation.

When a stricture comes to me for treatment, I set about the matter in this manner: first, the battery must be absolutely in good working order; next, the current must be positively uniform in direction and pressure; third, the instruments for localizing the electrolysis must be aseptic, and the urethra itself free from all gonococcus as far as can be ascertained. To this end I am in the habit of giving the patient an injection for some days prior to the procedure, and this wash is usually composed of bichloride of mercury or sulpho-carbolate of zinc—this latter salt having been a favorite with me for years before I began electrolysis for either stricture or gleet. I like, also, the use of camphor water as a vehicle, for its soothing effect; there is, as my readers probably know, good reason to avoid the use of cocaine in the urethra, for it has many times been provocative of very bad results when employed in even small quantities—why, I don't know. I have never used it in that neighborhood for any purpose.

The patient being ready, and the apparatus and accessories in good shape, I go about the work by gaining his confidence in the truth of the assurance that he is not to be hurt at all; I show him this by directing the current through his tongue-tip for a moment; through the eye upon the closed lid; through the ears from one to the other; through the fingers of one hand to those of the opposite. He thus learns that his perceptive faculties are unable to taste—to see—to hear—to feel the power to be applied, and if this is not sufficient to disarm his fears or suspicions, I send fifty times the current through some part of myself, which generally serves to satisfy him enough to allow a start to be made. I prefer to have the person recumbent, and I sit at his right side, because it is easier for me to handle the sounds in that attitude; he can stand, if he elects to do so, or if the seance is prolonged. Although I seldom use more than two sizes of bougies at a sitting, I have no hesitation in allowing the current to flow for half an hour continuously if the contracture is stubborn, or if a very low energy is needed in a susceptible patient. The amount varies from five to fifteen milliamperes—the average being, I imagine (for I keep no account of this), say six. The size of the first electrical sound is the next higher number than that of the ordinary bougie which will pass through the first stricture without causing pain. For example—if the largest uninsulated bougie which will go through is No. 5, American, then I take No. 6 electrical to begin with. I use American gauges for everything in my electrical work—wire, screws, posts, foil, insulator material, etc., from patriotic motives, and I patronize Republican dealers altogether because of the same opinions.

Things being ready, I dip the sound into some boro-glyceride, or if the canal is tortuous, I inject the urethra with that fluid. A recently introduced agent—campho-phenique—is also very good as a lubricant. The sound having abutted against the malefactor, I turn on the current from zero to the amount desired, the *negative* pole forming the internal electrode, the positive being applied by the patient over the pubes or perineum, well back. I don't like the indifferent pole to be placed on the thigh, for instance, or off to one side, because it is important that the direction of the current flow be *through* the stricture from front to back, in other words, through the calibre of the urethra as nearly as may be. The reason is obvious. Although electricity when applied to any part of the body is diffused laterally, the main mass of energy is in the direction of axial lines between the applying electrodes (or external poles), hence the method of putting one sponge or disk on the femoral region, as is habitually done by every writer that I have any knowledge of, is wrong in principle; a great loss of current is occasioned thus. We must, if success is looked for, send the whole force "where it will do the most good;" *i. e.*, directly through the adventitious tissue itself, and by the shortest route. The post-anal point is, therefore, the ideal locality for the positive. The utmost gentleness is to be observed in the introduction of the sounds, and in the pressure used to keep them against the face of the stricture. It is not pressure that gets the instrument through the obstruction, it is the softening and disintegrating capability of galvanism that does the work. The bougie

is simply the agent for holding the current right in the objective point, and nothing else; it is not to be looked on at all as a stretcher, pushing it drives the urethra before it and nothing more; the stricture remains still the breakwater between the bladder and the open air, and the breaksound between the doctor and the vesical reservoir. If the patient feels the slightest degree of uneasiness, not to say burning, reduce the current at once, to nothing if needed, then slowly turn on more; hold the point of the sound firmly, yet gently, against the proximal aspect of the contracture till it slips through, which it generally does in a minute or less; then pass it toward the bladder till it enters that viscus or till it encounters another narrowing, which is quite likely to exist if the first be not further back than the penile fold. Drop the energy after the stricture is overcome, whilst getting toward the bladder to either nothing, or to quite a small power. The prostatic region is sometimes tender, so don't worry the man by unnecessary irritation. If the sound will not go through after a few minutes trial it is too large, take one two sizes smaller and begin anew. This will usually "get there;" and if you haven't been more than five minutes at it altogether, there is no risk run in trying one more size, the next higher. Then give him a rest for two days. Two styles of sounds are needed, one rigid and the other flexible, the first for straight and the second for corkscrew canals. The exposed part by which the current does its work should not be longer than a quarter of an inch; all the rest must be well insulated. Nobody's appliances are the better for use; you can take your ordinary bougies and insulate them with caoutchouc dissolved in benzine, letting each coat dry well before putting on the next. Test their want of conductivity by holding them in the hand under a strong current before using them in the urethra of any person; then scrape off the coat from the end to permit the flow to prevail. A loop of bare copper wire will suffice to hold the pin fast to the bougie at the end held by the operator, or he can simply hold it against the instrument in his hand whilst working. Of course the sets purchasable for use are more convenient, but no one need wait for them if he comes across a suitable case when unprepared.

All subsequent work is conducted in the same manner; all points of the canal are worked over till the calibre is satisfactory to the physician (or, would it be well to call him surgeon?). When I am through with a case, I am in the habit of applying a low power current to the canal from end to end, as a sort of tonic; it may be a fad with me, but it has grown into a custom, and it does no harm anyhow.

In but one instance out of many hundreds now handled by myself, have I ever drawn a drop of blood; this was in the case of a man who had been under the care of a surgeon, noted for his radical manipulation of such disorders, and the urethra was so tender as to bleed on the slightest provocation. I finally cured him, however, and he remains well till this day, after several years of pretty wild living. I have never seen the method illustrated publicly except in one instance, when a noted practitioner from a neighboring village (in the sense that this locality is called by that pseudonym), demonstrated the maneuver before a class at a medical college. I had no opportunity to examine the patients, hence I do not know what the nature of their disorder was, nor how difficult the obstructions were to pass, but when I arrived at the amphitheatre the floor had quite a pool of blood at the foot of the place of torture; the man undergoing operation lost at least two or three tablespoonfuls of that vital fluid, and to me, the whole lesson was calculated to throw discredit on electrolysis as a practicable and desirable means of cure. Several students expressed in my hearing, their belief that the plan was a humbug; I regretted that they had no real chance to see what the actual merits of electrical treatment was, and I invited one or two of them to call at my office to witness the manipulation used there, but they never did show up, much to my chagrin, for I was, at that particular time, favorably situated to illustrate the value of electrolysis as compared with the ordinary style of treatment. I have been occasionally called on by some of the faculty to say something in reference to electrotherapy

before the classes, and I hope to be able to exhibit my own method to the young aspirants for the fame and worriments of a doctor's life.

Without being at all unduly enthusiastic about the matter, I hold that electricity is the most valuable agent in the hands of those competent to apply it in the positive cure of strictures of any tract accessible to the manipulation required. To succeed it is demanded of the operator that he has a thorough knowledge of electro-physics; no one is qualified to practice electrotherapy without it, despite the twaddle of some writers who throw about the subject rosy-colored and flippant generalities. The battery must be a good one, steady in flow, uniform in pressure, and easily controlled; *a meter is indispensable;* the combination of a battery and meter which shows a sort of waltz between zero and twenty in indices, then down to two and up to five, is N. G. By all means the ideal mechanism at our command now is the "Dry Cell Chloride of Silver" batteries built by the company in Baltimore, Md.; and with their absolute steadiness, their constancy at any given point on the meter, and the knowledge that they are always up to the top notch, no matter how long it may have been since last used, one need never feel worried as to how the current will be when tested. The batteries of this make are always *semper paratus*; all you have to do is to couple them up, attend to the operative requirements, disconnect the accessories when through with your work, return the box to its wonted place, letting it stand on its bottom, its side, or its top, feeling perfectly safe that it will be all right when next called on for work.

I still have the first battery of this company's make which I obtained when the new style came on the market. It is of the so-called "fluid cell" style—that is, its electrolyte is a liquid, but the cells are of hard-rubber, and readily detached for renewal; so I use it to show friends the construction of the apparatus, and the only alteration in it is to employ the "dry-cell" electrolyte, which is essentially that first used, but now produced in a pasty form, the consistence being such as to prevent its running out if the cells are inverted.

I notice in the current number of the *Medical Summary* a contribution from Mr. Sample, of Chicago, in which he feels greatly incensed because of my advocacy of this battery, but as the article is too mixed in its grammar, English and metaphor, I must let any answer to it go. I cannot afford to spend money on any but the best apparatus obtainable, and I therefore stick to that here commended for all ordinary purposes; occasionally I employ the Leclanche, and I have given my reasons for so doing often enough in type to satisfy reasonable critics why I do it. There is, however, nothing to prevent anyone from buying anything in the electrical line if they care to do so, nor to stop their wasting time, money, clothing, carpets, etc., under the use of destructive fluids when all this can be avoided, and equally good results attained by other means.

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ELECTRICITY IN THE TREATMENT OF URETHRAL STRICTURES.

By J. B. GREENE, M. D.

IN presenting this paper to the readers of the Times and Register, I do not intend to argue any of the complex questions that may arise as regards the action of electricity in general, or its action in the cure of strictures in particular. That it cures *I know*; as to its modus operandi I do not care to write, as that will doubtless be presented in a plain and easily understood manner by some one of the gentlemen who contribute to this number. I shall simply speak of a few points that I have learned by experience, and will present a case or two to show the results.

An advocate of the use of electricity in the treatment of any disease or condition, would be unjust to decry any other method, simply to bolster up ideas that he may have, and unless his experience is such as to convince him of the superiority of his method over all others, he is, as an honest man, compelled to grant his opponent a place in the field of experiment.

That many fail in the use of electricity, not only in the treatment of strictures, but in many other diseases, goes with-

out saying, but in all cases, or nearly all, the reason can be found. It is no unusal thing for a physician to say to me, that he has tried electricity as a remedy in strictures of the urethra, and failed with it. Upon inquiry I frequently find that the Faradic current has been used, or, if the galvanic, the dosage has been by the number of cells, often I am told that it has been used "strong enough to cause bleeding." Ignorance of electricity and batteries is more often the cause of failure than any other thing. Because "A" has failed, should we discredit the statement of "B," who claims to have had no failures?

Any good working galvanic battery will answer the calls of the practitioner, but a current controller and an ampere metre are as necessary to intelligent and successful use as is the battery. I sometimes think that the voltage should be taken into account as well as the ampereage, in other words I think a switch board an almost essential. With a battery of fifty cells we get a voltage ten times as great as with a battery of but five cells; we can with a rheostat properly adjusted cause the metre to show an ampere or a milli-ampere with the fifty cells,—with the five cells, through the same external resistance, we can get not over from five to seven milli-amperes. Now in the use of the full fifty cells, although controlled by the rheostat, are we not getting too great a voltage, *i. e.* is not the force so great as to change the character of the electrical action? I am not fully convinced that I am right, but the experiments I have made, show to me that a powerful voltage back of the rheostat, has made a difference in the treatment of cases markedly over the treatment with the same ampereage but with a far less voltage. Herein *may* be found the cause of some failures.

Pain is a factor in the successful use of electricity, or I should say, pain *ought not* to be a factor, for I hold that in the treatment of strictures by electricity, if pain is caused, or if blood is drawn, something is wrong, and that wrong should be sought for and rectified.

I am not in favor of the use of urethral injections of cocaine or any of the local anæsthetics; they do no good, and may do a vast deal of harm.

Of course it is understood that, in the treatment of urethral strictures by electricity, the negative electrode is introduced into the channel, and the positive applied to almost any part of the body. I have nothing to offer as to the bulbs as now used by operators in general, but I would impress upon the physician the desirability of a very large and wet sponge electrode as the positive. Too often the contact of the positive to the skin surface is too small, and is the cause of pain.

Whether all cases of stricture of the urethra can be cured by electricity or not, I am not prepared to say. I believe they can be so cured, still in a very small per cent. of cases it may fail.

The treatment by sounds or by cutting is often a failure, and I am inclined to the opinion that the treatment by electrolysis fails less often than either of the other methods named. I have had but one failure in a series of nearly two hundred cases, and that failure was caused more by the imperfect instruments than by the method per se.

Can an impermeable stricture, back of which is an urethral fistula, be cured by electricity? I answer, yes.

Case.—In March, 1890, I was consulted by J. S., a German, aged 30, occupation laborer. In 1876 he contracted gonorrhœa, which he allowed to run for six or more months, without any treatment. About that time he heard of nitrate of silver as an injection, and procuring a very strong solution he began its use. Notwithstanding the fact that a few hours after each injection, blood would flow from the urethra, and the inflammatory action was great and painful, he persisted in its use for some considerable time. A peri-urethral abscess finally showed itself, and a few days after it opened he noticed that urine flowed through it; it continued so to do until finally none passed via the anterior portion of the urethra; his condition remained about the same until in the winter of 1889-90, when he began to have cystic troubles, with frequent but small micturitions; it was for the bladder trouble that he consulted me. I tried faithfully to introduce a filiform through the urethra but could not; and closing of the fistula with the finger, and his at-

tempting to pass urine through the meatus also failed. I then tried to inject water through the urethra from the meatus, but could not. I then began the treatment for stricture by electricity, beginning with eight cells and using six milliamperes within ten minutes. Although he said he suffered no pain, he grew very faint, and I desisted from further attempts that day. Two weeks after he again submitted to the current, and at the end of twenty minutes the bulb passed through the stricture, and easily continued until it entered the bladder; the bulb used was a No. 10f. I thereafter continued to treat him once each two weeks, each time increasing the size by two. When discharged in October, 1890, I could readily pass a No. 27f sound. The fistula was healed, and he claimed to be a well man. To-day, January 2nd, 1893, I examined him, and found that a No. 29f steel sound would enter the bladder without trouble, and he is in splendid general health.

Can a traumatic stricture be cured by electricity? Yes, cicatricial tissue is cicatricial tissue, nothing more—nothing less, and as amenable to the kindly action of electricity as are the so-called non-traumatic varieties.

Case.—E. L. L.; American; aged 35; occupation, paper maker. In 1876, he contracted syphilis and gonorrhœa, and after undergoing treatment in many places and under various physicians, found, in 1880, that he had a stricture forming. In 1884, he went to Hot Springs, Ark., where he was cut for stricture with an Otis' urethratome. For a year he appeared better, but soon thereafter noticed a gradual return of the stricture. It continued to grow worse, and when he consulted me in May, 1887, I found that I could only, with much care and trouble, introduce a filiform. I began by passing over the filiform as a guide, a No. 15f. Newman perforated bulb, and soon passed into the bladder, without pain or bleeding. The line of treatment was followed up with increasing sizes, once every fortnight, until he easily took a No. 23f. He then disappeared, and I heard nothing more of him until in November, 1892, when he walked into my office, saying he felt well, and thought he was well, but as he had a year before contracted another clap, he wanted an examination, to see what condition he was in. Examination revealed a healthy urethra; a No. 26f. sound would pass down into the bladder of its own weight. I have seen him often since then, and he remains well—although not a Joseph in his morals.

The above case is particularly interesting from the fact of his having had a stricture that may have been of gonorrhœal origin, or may have been syphilitic (a syphilitic stricture of the urethra is as possible as a syphilitic stricture of the rectum). After cure by cutting, he had a new stricture, which we have every right to believe was caused by the knife—a traumatic stricture. After the cure of that stricture by electricity, he again contracted a gonorrhœa, and a year after the cure of the gonorrhœa, he presents himself with a urethral calibre three sizes larger than when he quit treatment.

In a private letter to Dr. Robert Newman, of New York, under date of March 17th, 1890, I gave him an account of a case treated in 1884. In 1889, the patient died, and a post mortem examination, in the presence of Dr. R. T. Van Pelt, (then) of this city, and Drs. A. L. Wagner and C. W. Butterworth, of South Bend, showed perfectly healthy urethra, as well as a normal prostate. Prior to treatment, he had a hypertrophied prostate, together with more or less of the symptoms incident to that condition. Knowing of the prostatic disease, and considering that he was a man of seventy-three years of age, I could but give the credit of the cure to electricity.

MISHAWAKA, IND.

THE ELECTRIC LIGHT CONSIDERED FROM A HYGIENIC POINT OF VIEW.

BY DR. J MOUNT BLEYER.

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MY object in bringing this subject before the notice of the medical, electrical and other scientific bodies, is simply to show the great importance attached to it. Herein my intentions are to demonstrate why all other artificial lighting should be abolished from all dwellings of whatsoever kind and the electric light substituted.

"Without health, life is not life, it is only a state of languor and suffering, an image of death," says Rabelais.

In early times but a small fraction of our forefathers' lives was spent under artificial light. They rose with the sun and lay down to rest shortly after sunset. From that early period, as man has advanced in civilization, in the thirst for knowledge derived from books, and in following the gentle pursuits which demand an indoor life, there has been a steady increase in that fraction of our lives which is spent under light other than that of the sun.

But the improvement in the quality of the artificial light has been very slow. The ruddy lights and picturesque shadows so faithfully handed down to us in Rembrandt's pictures, show us very graphically what our poets have called "the dim glimmer of the taper," of those days. A few years before the introduction of gas, Argand, by his improvements in the burner of oil lamps, enabled our forefathers to see for the first time a comparatively white light.

Prior to the introduction of the electric light we had been accustomed to consider hours spent under artificial light as hours during which all conditions are less favorable to perfect health than they would be during daylight. Can we now hope to ameliorate this condition of things through the agency of electricity?

Before this question can be discussed, I must point out the chief differences which exist between hours of work or recreation spent in daylight and under artificial light. In the former case we live in abundance of light. The sunlight itself exercises a subtle influence on our bodies That mixture of heating and chemical rays which, when analyzed form the solar spectrum and, combined, form the pure white light of daylight, is needed to enable all animal and vegetable organism to flourish in the fullest conditions of healthful life.

In nearly all cases when the sun is up the functions of life are in the state of fullest activity, and when it sets they sink into comparative repose. In daylight life works; in darkness life sleeps. In addition to the abundance of pure white light, the heat attending sunlight is necessary for health. On the other side, when working under artificial light we have these conditions altered in degree.

1st. We have an insufficient light, as a scale of lighting by gas or by electricity, which would be pronounced excessive at night time, is still far inferior to average daylight.

2d. All artificial lights, whether produced by combustion, as in the case of candles, oil, gas and petroleum, or by the incandescence of a conductor by the means of electricity, produce heat. This heat, in proportion with the light afforded is enormously in excess of the heat given by sunlight. Electricity is far the best in this respect, but even it is inferior to sunlight

3d. All these same illuminants, excepting electricity, contaminate the air and load it with carbonic acid, sulphur and other compounds, all injurious to the health and to the general comfort of the body.

What are the effects it has upon our health in general and our eyesight in particular? That proportion of colored rays which when combined, form white sunlight is that best suited to healthy life, is necessary for that sufficient and proper stimulus to the organic changes which go on in our bodies, and which we call a state of good health. The various artificial lights differ very widely from sunlight in this respect, that they are all more or less deficient in the rays at the violet end of the spectrum, commonly called the actinic rays, which most probably exercise a very powerful effect on the human body. It is the want of a due portion of these violet rays which makes all artificial light so yellow. Even the light of the electric arc, which is richer in these rays than any other, is still on the yellow side of sunlight. The incandescent electric light is next best in this respect. Next in order comes gas, petroleum and the various oil lamps.

Turning now to the comparative heating, air vitiating properties of artificial lights, which we shall find it convenient to take together, examine tables below, prepared by Dr. Freymolt Lidy, of London, which shows the oxygen consumed, the carbonic acid produced and the air vitiated by the combustion of certain bodies burnt so as to give the light of

twelve candle standard. Each candle burning at the rate of 120 grains per hour, are here given in the table below :

Burnt to give light of 12 candles equal to 120 grains per hour.	Cubic feet of oxygen consumed.	Cubic feet of air consumed.	Cubic feet of carbonic acid produced.
Cannel gas . . .	3.30	16.50	2.01
Common gas . .	5.45	17.25	3.21
Sperm oil . . .	4.75	23 75	3.33
Benzole	4.46	22.30	3 54
Paraffine	6.81	34.05	4.50
Camphine . . .	6.65	33.25	4.77
Sperm candles .	7 57	37.85	5.77
Wax	8.41	42.05	5.90
Stearic	8.82	44.10	6.25
Tallow	12.00	60.00	8.73
Electric light . .	none.	none.	none.

Burnt to give light of 12 candles, equal to 120 grains per hour.	Cubic feet of a r vitiated.	Heat produced in lbs. of water raised 10 deg. F.
Cannel gas	217.50	195.0
Common gas . . .	348.25	278.6
Sperm oil	356.75	233.5
Benzole	376.30	232.6
Paraffine	484.05	361.0
Camphine	519.25	325.1
Sperm candles . .	614.85	351.7
Wax	632.25	383.1
Stearic	669.10	374.7
Tallow	933.00	505.4
Electric light . . .	none	13.8.

It is found not to be of unusual occurrence that the upper stratum of air of the rooms in which we live is heated to 120 degrees after the gas has been lighted for a few hours. If you look again at the table, you will see that each gas burner that we use consumes more oxygen, and gives off more carbonic acid, and otherwise unfits more air for breathing, than any human being, and it is this excessive heating and air vitiation combined which are the main causes of the injury to the health from working long hours under artificial light.

Many instances of the fearful state of the atmosphere of some of our public buildings, institutions, hospitals, shops, factories, and our private homes, after the gas or other lighting has been lighted for a few hours, could be given, but suffice it to say, that these points herein cited are facts proven experimentally. Thanks to the general introduction of electric lighting, it is already adopted in most of our modern public buildings, ocean steamers, new public hospitals, and other institutions, etc. But we still want its use more generally adopted. There is no doubt that the public has reached the mature age of knowing and comprehending the value, both from a hygienic and practical point of view, that electric lighting has taken, and it must become the illuminant of the ages.

During a musical festival, held in Birmingham, England, Mr. Henry Lea, of that city, conducted some careful experiments. He found that when gas was used, the temperature near the ceiling rose from 60 degrees to 100 degrees, after three hours' lighting. The heating effect of the gas was, therefore, the same as if 4230 persons had been added to the full audience and orchestra of 3100. Similarly the vitiation of the air by carbonic acid was equal to that given off by the breathing of 3600 additional persons, added to the audience of 3000. But he found, on evenings when the electric light was used, the temperature rose only one and a half degrees during a seven hours' trial, and the air, of course, was vitiated only by the breathing of the audience.

We all know that the time when we suffer most from the effect of artificial light is in crowded places of public amusement which are at the same time brilliantly lighted. Many have been unable to go to the theatres, or attend evening performances of any kind where other lighting than electric is used, because of the intense headache which invariably attends or follows a stay in such places. This headache we can only say, is inseparable from the heat and glare of the gas. Now this phrase is not strictly correct. It is no doubt, due to the heat of the gas and its air-vitiating properties, and when we use the word glare, I believe we refer to the effect the gas light has upon our heads, which effect is not due to excess of light; on the contrary, I believe, if a good amount of light be given by the electric light, without the heating and air vitiation being present, such a headache is never produced.

Good light has good effects, even on the temperament. If the experiment is tried, in an assemblage of people, of gradually decreasing the lighting of the room, it will be found that the spirits of every one will be depressed, just as the light is depressed, and *vice versa*. From this fact the conclusion can be drawn that during the hours of waking every person is benefited by increase of

light up to full sunlight, providing that this high degree of lighting is not attended by heat and by air vitiation, and that the source of light must not be from one or two brilliant points only, but it must be well distributed and not such as to cause dark and deep shadows.

What effects has the electric light on the eyesight, as compared with other light?

Here is an important question to be answered. Healthy eyesight demands a plentiful supply of light. It is the greatest mistake to suppose that a state of semi-darkness is good for our eyes, unless they are defective, or recovering from the effects of injury or disease. We know that those whose professions or trades, as painters, engravers, printers, watchmakers, or, indeed, anyone, the quality of whose work depends on the excellence of their eyesight, desire a flood of pure white light thrown on their work. No fewer than nineteen-twentieths of the diseases of the eyes arise from working the eyes long hours with insufficient light.

Another great cause of injury to eyesight is the unsteadiness of most artificial light. Nevertheless, of the many improvements made in late years by the introduction of all kinds of gas burners, etc., these are not to be compared with the light of the incandescent electric lamp. The electric light is the greatest specific against the premature loss of the function of good eyesight and the premature use of spectacles.

I have made some observations lately, regarding the effect that the new illuminant has upon the voices of singers and actors during and after their performance. I find that out of thirty of the foremost singers and actors to whom I put the question, many informed me that since the introduction of the new light in the theatres, they are able to preserve their voice in much better condition, and are, by 50 per cent., more often in a good voice. They are remarkably cooler, don't perspire, are not husky while singing or acting. The atmosphere is much alike, and the temperature is equal through the whole building and dressing rooms. This has greatly diminished the risk of taking cold. Their throats are not parched and the voices not injured, in comparison when performing in theatres and halls where gas light is still used.

It is useless for me to further enlarge on the many conditions of the electric light, as it indirectly affects health. I am here citing also the many additional pleasures the eye gets from its use. For instance, flowers in our rooms do not fade, and are seen in their true colors. Pictures and all colored objects are seen to better advantage. The possibility of being able to turn a flood of light into drawing and dining rooms, at six o'clock, on a winter's morning, and this without taking away the freshness of the air, so that the whole of the cleaning can be finished as thoroughly as if done by daylight, is one of great advantage to the housekeeper. Again, the good effect such a light has upon the health of our children is simply inestimable. No night lights, no matches, need be left about, no gas turned down low, or the fear of suffocation. A child can be trusted to press a button, and turn the light on or off. The doctor's consultation rooms gain a most welcome friend. The hospital advantages are many from its use. The lamps being high and out of reach, are not easily broken or overturned, and the air of the children's nursery, even if the light be kept burning the night through, remains pure throughout, and so with the invalid's rooms. Another very important point in favor of its use is the absence of heat, a very important factor to be considered. It is comparatively easy to thoroughly ventilate and cool, during the hot weather, a room or public place lighted by the electric light. Draughts, by its use, are entirely avoided.

With this mode of lighting, there is absolutely no danger to life, even if any accident happens to the wires, or any other unforseen accident. As far as ornamentation of fixtures go, there are on the market designs suitable for any purpose, and manufacturers who are ready to design special orders. These electric fixtures which are now made, excel anything we have had or seen in the gas or any other illuminating conductors.

The only drawback is undoubtedly the slightly higher price over gas, but if it were a thoroughly acknowledged fact, that in paying the very slight difference for the electric light, the public were pay-

ing for health at the same time, and every hour of a man's life spent in a room lighted by gas, tended to shorten his life and abridge his powers of work, in time the public might change their minds sufficiently to cause them to spend their money on healthful light, as they are now so largely doing on the sanitary and other arrangements necessary to make healthful houses.

I simply bring this question up before you from a sanitary point to be considered as it is important enough to receive notice by the medical profession.

118 E. 16TH STREET, NEW YORK CITY.

STRICTURE OF THE MALE URETHRA AND ITS TREATMENT BY ELECTRICITY.

BY CHAS. G. CANNADAY, M. D.
[Member of American Electro-Therapeutic Association, etc., etc.

AS to the congestive forms of stricture following traumatism, as well as in acute gonorrhœa, I shall have little to say in this article; for while I am satisfied that it would be beneficial if properly applied, still the introduction of even the smallest instrument most carefully handled is productive of such an intense degree of pain, as to preclude any hopes whatever of this becoming at all popular either with the profession or the laity.

As to the spasmodic form of stricture of the male urethra, my experience in a practice of many years has not revealed to me the existence of a case of well defined spasmodic stricture that gave me anything more than temporary annoyance, and even if it should exist in a patient of mine, I would expect to find it due to some primary cause and treat that.

True organic stricture in the male is more frequent than is generally supposed, and is often responsible for slow recoveries from specific urethritis. It is often a source of constant annoyance both to the physician and patient, from time to time recurring and persisting in spite of the old treatment. In this condition the normal elasticity of the urethral tissue is replaced by inflammatory exudation, which finally results in excessive cicatricial tissue. The epithelium and submucous tissue, together with the corpora spongiosum and at times the corpora cavernosa, are involved in this specific inflammation. Infiltration of tissues, by leucocytes interspersed with fibrinous and intercellular substance, is found. Certain blood vessels are obliterated and compression of others' walls occurs to such an extent as to impair the action of the unstriped muscular tissue; finally fatty degeneration ensues and numbers of the leucocytes break up and disappear, some of the cells elongate and become fusiform, while the intercellular substance increases and is branched into fibres; thereby obliterating blood vessels and impairing nutrition of tissue. This necessarily produces contraction of this excessive tissue and consequently a narrowing of the urethral canal, which may be unilateral, bilateral, annular or tortuous. It may be recent or of long standing.

The treatment of organic stricture by dilatation, either by bougies or steel dilators, has in my opinion a tendency to stretch, not the cicatricial tissue, but the tissue to which it is attached; which, having its normal elasticity still left, regains its original state, and the stricture returns. Thus the treatment by urethrotomy is based on the idea of *similia similibus curantur:* you make additional cicatricial tissue seeking to relieve a trouble due to this tissue's existence, and are forced to keep up dilatation during the patient's lifetime.

My treatment of stricture and chronic gonorrhœa for several years has been limited only to electricity, with the internal administration of the bichloride; though I am free to admit that, since refraining from injections for several weeks after gonorrhœa is contracted, and then using the weakest injections gently, stricture will be rarely met.

I am a firm believer in the developing powers of electricity (vide article read before American Electro-Therapeutic Association, in N. Y., Oct., 1892, and printed in N. Y. Journal of Obstetrics and Gynecology, vol. 2, page 1121), and it is to this I attribute its success in urethral stricture. It is in strictures of recent date that the results are best; if properly applied it gives tone and support to the walls of the vascular supply, stimulates the absorbents, and produces a determination (a bathing of tissues if you will) to the parts, thereby aiding in the absorption of inflammatory products, and

restoring the lumen of obliterated vessels. In deep strictures, those involving the prostatic and membranous portions of the urethra, together with the concomitant obliteration of certain ducts peculiar to that region, you may hope for your most satisfactory results.

My treatment of these cases is a modification of that first suggested by Newman. I use Newman's sounds, the smallest that will pass the strictures being used as a minimum, then attaching the next size to the wire from the negative pole, you introduce your sound to the stricture. The inactive pole (the positive), is long and covers the urethral side of the penis back to the perineum.

You turn on the current until your milliampere registers from 3 to 5 m. in proportion to your patient's sensititiveness; with your left hand surrounding the penis and supporting it, you aid your right hand in gently pressing the sound through the structure. This will not be achieved often for a few minutes. Now gently reduce your current, withdraw your sound to within edge of strictured portion, and apply the faradic current, just sufficiently strong to not induce pain. The external electrode is kept at same place as with previous treatment, and the sound gently moved through stricture. These treatments I repeat twice a week and in some instances every 8 or 12 days, each case being a guide as to frequency and strength of current. From recent experiments I am certain that an urethral electrode to be used with the faradic current, both poles intra-urethral, will be of superior advantage to the treatment I have named; and the instrument is now in the hands of the maker and I hope to soon report as to its utility.

19½ Salem Ave.

ELECTROLYSIS FOR URETHRAL STRICTURE.

By O. S. PHELPS, M. D.

I WILL cheerfully respond to your invitation to contribute something to the subject of electrolysis for the cure of urethral strictures. My attention was first called to this method of treatment by the writings of Dr. Robert Newman. The plan seemed to be at once philosophical, and in the hands of its eminent champion highly successful. My own experience quite limited and confined to but five cases.

Case 1.—C.W., age 38, furniture truckman; had been very strong, able to carry heavy articles up several flights of stairs; came to me Dec. 2, 1891, complained of weak back, general nervousness and inability to pursue his vocation. At times he experienced great difficulty in voiding his urine.

Had been treated for malaria and "kidney trouble," (a term I am sorry to say often used by the family doctor in a very meaningless way). Eight years before had gonorrhœa: said he was cured at the time and has had no discharge since. I introduced a No. 18 American scale, 27 French, bulb bougie four inches, and then met an obstruction; smaller sizes were successively tried until No. 9 was reached, which passed (No. 9 American, 14 French). Then choosing a No. 10 A., 15 F. bulb electrode, the negative pole from 10 Axo cells was attached, and to the positive a felt electrode 6 in. square applied over the sacrum. The current was then turned on very gradually through a Massey rheostat to 3½ milliamperes, at which a slight sensation was perceived by the patient. The bulb was gently held against the stricture and in four minutes passed through.

In four days the patient returned and a No. 12 A., 18 F., was tried; this time the urethra was more tolerant and 4½ milliamperes used the same way as before—the bulb passed through in 4½ minutes without pain. Returned the fifth day, said urine passed very freely and he could then realize how much obstruction there had been—weak feeling in back all gone. Used No 13 A., 20 F., 3 milliamperes 3 minutes. Four days later, passed No. 15 A., 23 F., 4½ milliamperes, 4 minutes. Returned the sixth day, passed No. 16 A., 24 F., 3½ milliamperes 4½ minutes; four days elapsed and then passed No. 17 A., 26 F., 4 milliamperes, 4 minutes; five days later passed a No. 18 A., 27 F., 3½ milliamperes, 5 minutes. Patient did not return till two weeks, when No. 18 was again passed with 3 milliamperes in 2 minutes.

In four days No. 20 A., 30 F., was tried and passed with 4½ milliamperes in 5 minutes. I felt I had rather overdone

the matter, but five days later was able to pass the same electrode with 3½ milliamperes of current in 4 minutes; this was repeated in six days, same electrode, 3 milliamperes, 2 minutes. The patient then decided he had all the room he needed, and as all of his nervous symptoms, backache, etc., had disappeared, declined further treatment. After two months a No. 20 sound passed readily, showing the urethra to be in *statu quo*. Saw him in Nov. '92, he reported no return of his former symptoms—did not make an examination.

Case II.—W. T., age 30, applied for treatment Feb. 20, 1892, complained of nervousness and general debility, and gave a history of urethritis ten years before. Four years ago was examined for stricture and an operation proposed. This he declined without consultation. The consultant who examined him said he had no stricture, and the matter was dropped. I examined him with a bulb bougie, and found a stricture at 3, and one at 5½ inches. My patient was easily convinced of the presence of the strictures, and when the treatment by electrolysis was explained to him, and he was assured that it would be without pain, or any interference with his business he readily consented to treatment.

The largest bulb that would pass was a No. 12 A., 18 F. A No. 13 A., 20 F. was selected, and passed through both strictures in 6 minutes with 4 milliamperes, negative current. Fifth day a No. 14 A., 21 F., was passed in 8 minutes, 4½ milliamperes.

Sixth day, a No. 16 A., 24 F., 5 milliamperes, 9 minutes. Four days, later passed No. 18 A., 29 F. through both strictures, 4½ milliamperes, 10 minutes. On his return in four days complained of some soreness—passed a No. 15, with positive current slowly through the strictures, which gave relief.

Four days later passed No. 18 again with negative current, 3½ milliamperes, 5 minutes. Six days, passed a No. 19 A., 29 F., 4 milliamperes, 8 minutes. In four days passed a No. 20 A., 30 F., 4½ milliamperes, 8½ minutes.

Patient returned in two weeks, when a No. 20 sound was passed easily, and he was discharged. Has been seen frequently since, and no return of difficulty.

Case III.—C. A., aged 24, engineer, was operated on for stricture, two years before, by forcible dilatation, which gave some relief. Recently had much trouble in voiding urine, and a slight discharge of muco-pus.

May 15, 1892, introduced a No. 15 A., 23 F., bulb bougie; encountered a very sore place, one inch from meatus, under side. At 5½ inches met an obstruction; not painful; tried a No. 10, which passed tightly. A No. 11 A., 17 F., was then passed, with 4 milliamperes negative current, in 3 minutes. Again, in four days, a No. 13 A., 20 F., was passed, with 4½ milliamperes, in 5 minutes. As he complained each time of great soreness near the meatus, I applied a No 15 bulb to the sore place, with 8 milliamperes positive current. Did not see him again for four weeks, when he returned with increase of the discharge and soreness. I then applied Dr. Newman's galvano-cautery sound, one strong flash. Patient returned in a week, all discharge and soreness gone. Resumed treatment of stricture; a No. 13 A., 20 F., passed stricture at 5½ inches from meatus readily, without a galvanic current, showing it had remained the same. A No. 15 A., 23 F., was passed in 5 minutes, with 4 milliamperes negative current.

The case continued without incident till a No. 20 A., 30 F., was used, and patient discharged, cured. An interesting fact connected with this case, and, indeed, with a majority of those coming under my observation, is their having been treated for malaria; their symptoms having been mistaken for that condition.

Case IV.—J. J. T., age 22, consulted me June 22, 1892, for general debility and pain in the back, which would, at times, become very acute, and often reflected through to the bowels below umbilicus. Relief was sought at the hands of his physician, and temporarily obtained by subcutaneous injections of morphia. He had a very small meatus, and a history of former gonorrhœas, which led me to think he might have one or more strictures, though he did not complain of any difficulty in voiding his urine. The meatus would not admit a No. 9 A., 14 F., bulb bougie.

Applied 8 per cent. solution cocaine, and enlarged meatus with bistoury sufficient to pass a No. 21 A., 32 F., sound. At three inches from meatus, sound would pass no further; caused great pain, cold perspiration, and faintness. A No. 9 A., 14 F., bulb electrode was gently passed down to the bladder, with 2 milliamperes positive current, which relieved the pain. Repeated this for several days, till the oversensitiveness was gone. Three strictures were then found, at 3, 4 and 6 inches from meatus, through which a No. 12 would pass tightly. A No. 13 A., 20 F., was then passed, with 4 milliamperes negative current, in 10 minutes, without pain. Patient returned the fourth day, and said he felt like a new man; all of his reflex pain had disappeared. Treatment was continued without incident at from four to six day intervals, till No. 20 A., 30 F., passed freely.

Case V.—W. S., fireman, age 26. Applied December 11, 1892, for treatment for gleet, the sequel of a recent gonorrhœa. Gave history of several previous attacks, and considerable difficulty in voiding his urine, particularly if he drank beer prior to his last urethritis. Meatus very small, scarcely admitting a No. 9 A., 14 F.; enlarged it so that No. 21 would pass; found two strictures at 3½ and 5 inches. Passed, rather tightly, a No. 9 A., 14 F., bulb electrode. This caused considerable pain, and before withdrawing it, attached a positive pole, with 3 milliamperes galvanic current, and gently and slowly withdrew it, which relieved the pain, and, for the time being, the discharge. On his return, four days later, patient thought he was well, only for the unhealed meatus, which was kept open with a sound. Introduced No. 9 again; positive current; 3 milliamperes; one-half minute at each stricture; much less soreness. Four days later, could pass No. 9 without pain. I then introduced No. 11 A., 17 F., with 4 milliamperes, negative current, and passed both strictures in 9 minutes. The case has advanced smoothly to date, January 11; passed a No. 19 A., 29 F., with 4 milliamperes, in 7 minutes.

I report these cases in detail, not because there is anything new or remarkable about them, except it be in the simplicity of the treatment, and the uniformity of results.

I have followed closely the lines marked out by Dr. Newman, and it has only been when I have departed from them in using too high a current, or a little too much pressure upon the electrode, or proceeding when there was too much sensitiveness of the urethra, that I have met with any trouble whatever.

I have found the maxim of a former and much revered teacher, Dr. Cordyn L. Ford, "Make haste slowly," is especially "golden" in the treatment of urethral stricture by electrolysis.

143 WEST 131ST STREET, NEW YORK.

News.

The Pope Mfg. Co., of Boston, sends out a neat and useful calendar for the desk.

A very convenient little calendar and diary combined is issued by Fred'k Stearns & Co. It is called the "*Daily Reminder*," and is designed as an aid to the memory, by noting engagements that are apt to be otherwise forgotten.

In THE TIMES AND REGISTER of December 31 appeared a note concerning Piperazin, the latter part of which was inserted by one of those annoying mistakes that occur in every journal occasionally. The manufacturer of the drug in question is E. Schering, and their agents in America are Lehn & Fink. Messrs. W. H. Schieffelin & Co. are in no way responsible for the mistake, which occurred in this office.

The "American Text Book of Surgery," edited by Professors Keen and White, of Philadelphia, which has only been issued a few months, is already a phenomenal success. It has been adopted as a "Text Book" by forty-nine of our leading medical colleges and universities. Nearly five thousand copies have been placed in physicians' libraries, and every indication points to a sale of at least as many copies more in the next six months.

A new disinfectant denominated kresin has been brought out by Schering and Glatz. It is said to be efficient, non-corrosive and comparatively safe.

The pharmaceutical pig has disappeared from the medical journals, for which we are duly thankful. But its place is more than filled by an artistic atrocity representing an obese steer, whose ungainly form disfigures the pages of our Western contemporaries. Why cannot an advertiser devise something that will attract the attention and yet not offend the eye of taste?

An American text-book of the medical and surgical diseases of children is announced as in preparation by Mr. Saunder's house. Sixty-two names are listed as authors, embracing men from all parts of the United States.

William Mawhor, of considerable wealth and good standing, residing in Sidney, Iowa, has been charged with poisoning his wife with strychnine. It is said that of his four former wives, three died with symptoms similar to those shown by the last one, in whose stomach the State Chemist has found strychnine in large amounts. Mawhor is a native of Ireland.

Dr. Boardman Reid, of Atlantic City, intends to spend the winter at Thomasville, Ga.

The N. Y. *Medical Times* suggests that a tax shall be laid on quacks and quack remedies. England raises a large income from taxes on patent medicines; and when one reflects on the enormous sums paid by the people to the Jaynes, Warners, etc., it seems no more than right that they should be taxed at least as heavily as the whisky and tobacco trades. Men will persist in pouring drugs of which they know nothing into bodies of which they know less; and since individual liberty requires this, by all means let them enjoy it. But those who furnish the poison ought to pay for the privilege.

Dr. Bryant, of the New York Board of Health, recommends the substitution of wire mattresses for the textile substances now used in lodging houses. The recommendation is a good one, but should be made in summer, to secure general acceptance. In the tropics no mattress is used but the woven wire frame, with a blanket on it. For comfort, coolness, ventilation and cleanliness it cannot be excelled.

The *London Spectator* says Cleopatra was a hypnotist. Not more than every other pretty woman.

In *The Sanitarian*, Dr. Bell effectually disposes of the plea that rags do not transmit cholera. According to Mr. Augustus Smith, clothing offers the most usual and convenient means for the transmission of cholera; but when the clothing has ceased to be such, and is classified as rags, the danger has passed away. We trust that the authorities will not be misled by such whimsical pleading, but will continue the prohibition of the importation of foreign rags as long as cholera continues to infest any part of Europe.

The *Doctor's Weekly* is to reappear as the *N. Y. Polyclinic*, with the faculty of that institution as editors. This is commendable. King is a Hercules for work; but to successfully edit and manage a medical weekly is too much for any man to undertake.

A Belgian surgeon has immortalized himself by performing laparotomy on two cholera patients and washing them out with sublimate. The patients died promptly.

New York City has over 2300 medical students, Philadelphia, 1774, and Chicago, 1297.

Castration, of men, for melancholia, is reported to be successful. There is little doubt that this operation would be effectual as a prophylactic.

Caviare destroys the cholera bacillus. But perhaps some less radical remedy than this will be discovered.

Berlin has 183 policlinics.

A New Dye for the Hair.—Aterin has been suggested as a possibly valuable dye for the hair. It has extraordinary coloring power for organic fibers, and is quite free from toxic action. The fatty substances must be first removed, when any organic fiber will take up the color readily. Any shade, from flaxen to black, may be produced, by varying the strength and number of applications. Several applications of the pure solution are required to produce black tones.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
MANAGING EDITOR.

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QUARANTINE.

DR. C. W. CHANCELLOR, of Baltimore, writes strongly against the system of quarantine that implies seclusion; and in his eyes, national quarantine implies national seclusion. There is, however, a broad distinction to be made between what ought to be and what is. Had we the well-equipped system of municipal sanitation for many years in practical operation in England, we, too, could open our doors and bid defiance to the invading bacillus. But, while some of our seaboard cities have really efficient sanitary departments, this cannot be said to be the case in *all* our ports to which infection may be brought. Local quarantine means the carrying out of local, or rather personal, views; and this means the necessity of internal quarantines. For, if New York believes that foreign rags are harmless, and allows their free importation, while Philadelphia prohibits such admission, the latter city must equally prohibit the introduction of rags from New York to be consistent, as the foreign rags may be among them. And while New York forestalls the expected emergency by increasing her inspecting staff by twenty-five and thirty at a time, Philadelphia provides for the same danger by cutting her overworked staff of fifteen down to eight. This, again, is the fault of Councils, without whose consent the Health Board cannot purchase a paper of pins; while the New York Health Board is a department, and can, if need be, issue bonds and raise what funds are required for sanitary work.

We have watched with interest the discussion of local versus national quarantine, and have not seen, as yet, any valid objections against the latter. Local boards may be efficient, and they may not. They certainly prefer to exercise the authority themselves, as is quite natural; but until the country at large has learned to appreciate the value of hygienic work much better than is now done in Philadelphia, the general safety is best secured by the administration of quarantine by the general government.

Annotations.

MEDICINE VIBRATOIRE. — (Progrsè Mèdicale). A neurologist who follows the fashion has to make a marvellous display of all sorts of machines, more or less mysterious to the patients. The Salpetriere, at Paris, introduces a new sort of apparatus for the treatment of nervous affections (Paralysis agitans, hysteria, neurasthenia, insomnia, etc.), by vibration of the whole body or of the head alone, producing up to 600 vibrations a minute. M. Charcot knew that many patients with paralysis agitans are very favorably influenced by the vibrating movement of the railway cars; as early as 1873. M. Vigouroux had shown that the vibration of an enormous tuning-fork on a sounding-board has the same curative influence as the metals, the

magnet, and static electricity, that it cures rapidly hemianæsthesia and contractures. Before very long the Salpetriere will get a kind of branch-office at Lourdes, as the miracles of this famous place have the same good effect on those cases. They will rather do this than recognize the facts and explanation given by the results of hypnotism, as used by the school of Nancy and great numbers of reliable men in France and elsewhere.

AD. MEYER, M. D.

470 W. MADISON ST. CHICAGO, Jan. 6, 1893.

ELECTRICITY AS A UTERUS DEVELOPER.—(A paper read before the American Electro Therapeutic Association.)—C. G. Cannaday treats of the use of the negative galvanic pole, with faradization, in developing the uterus. Faradization develops the muscular tissue and the involuntary fibers of the vessel-walls. Galvanism causes a determination of blood to the part stimulated, affording increased pabulum for nutrition. To be successful the treatment must be frequently applied and continued for months. As corroborating his views, he quoted cases of epilepsy of developing puberty, hysteria of development, dysmenorrhœal hysteria and dysmenorrhœa and sterility cured by electricity. In three other cases of dysmenorrhœa with undeveloped uterus, cures were obtained from electricity when drug treatment failed.

THE *Medical Review* expresses doubts as to whether the recent epidemic in St. Louis was really typhoid fever, and denies the responsibility of the city water for it. The vegetable supply of St. Louis is condemned, and the *Review* states that East St. Louis, drinking river water, but obtaining better vegetables and fruit (why so?) had only a few casses, and those acquired in St. Louis. The reasons assigned for the view that the epidemic was not typhoid are, its course, symptoms, low fatality, short duration, excessively high fever and subnormal temperature. Stercoremia, Dumesuil pronounces it; from the use of decomposed vegetable matter.

Nothing but the microscope will settle the question.

NATIONAL, VERSUS STATE QUARANTINE.

IN discussing the question of quarantine, from the sanitary standpoint, it is not our purpose to consider it from a political view; but, when a concentrated move is made by the cunning, medical strategists and shrewd diplomats, for the purpose of centralizing authority, and conferring on a single man, in this great Republic of ours, the unlimited powers of an autocrat, it is time that the independent, liberty-loving element in the profession stood up as one man, and denounced this proposition in such unmistakable language as would leave no doubt as to their convictions on this subject.

The wars of the Revolution and the Rebellion, for once and for all time, let us hope, crushed the last vestige of so-called paternal government.

This nation needs no liveried sinecurist in the cabinet. The states are amply competent to guard their ports of entry against epidemics.

Open wide the gates, then, and let the myriads of hungry, unfortunate, poverty-stricken creatures of paternal Europe come. Let it not be forgotten by those who now clamor so loudly against emigration, that they themselves are but trespassers and squatters; for this country, by natural and any other right, belongs to the red man.

But, before we seriously consider the question of national defense against cholera, and press on in the mad race after phantoms, let us seriously inquire: Is this malady contagious, at all; in any other sense than is typhoid fever? There certainly isn't a scintilla of proof, notwithstanding the frenzy of fright which struck New York, and was spreading westward, that there was a single case which developed from supposed cholera sources. It appears that with three of the cases of death alleged to have followed from Asiatic cholera, not one of them had been within miles of the condemned ships lying in the harbor. As a matter of fact, the vital statistics of New York for 1892 show many less deaths than in 1891, from choleraic diseases.

Let us see what they were doing in Europe while our president was about to

issue a proclamation against immigration and thereby strike a clipping blow at all our maritime industries. Stopping at Albion, we find here, though more than three thousand miles nearer Hamburg, with her stupendous commercial marine, pursuing her usual serene course, her harbor-indented coast open to the entire world, without even a thought on the quarantine question. And who heard of cholera giving Johnny Bull any alarm as to plague-stricken cities in England; while the cholera-nostras scare had Uncle Sam shaking in his boots?

Let us give the poor emigrants a show, enough of good food, pure air, ample clothing, with an abundance of soap and water, and the science of quarantine will quickly become obsolete, and be interesting to the student of the future from a historical standpoint only.

Our readers are to-day presented a number of valuable and interesting articles upon the treatment of strictures by electrolysis; written by those who have tested the method and are using it. Possibly, we may hear from the other side of the house, and at some future time put together a special on the older methods of treating stricture. We have several other specials in preparation, but do not care to commit ourselves to the publication of any until the material is actually in our hands. In the mean time our readers will not suffer, as our editorial table is covered with original papers in number and value exceeding anything in the history of the journal.

We lay before our readers to-day both sides of the quarantine question, as presented by two members of our staff. One favors national, the other local, quarantine. There are cogent arguments on both sides, and our readers may constitute themselves the jury.

Letters to the Editor.

I HAVE used galvänism in the treatment of stricture of the urethra during the last ten years, with the negative pole always in the urethra, and the positive in the hand or on the nape.

My application of the current differs somewhat from that commonly adopted. Instead of a bulbous electrode with an insulated stem, I use an ordinary, slightly conical, steel bougie, of the largest size that can be passed through the stricture. The instrument is pushed into the stricture until it sticks firmly, and then the current is turned on. The current invariably leaves the body at the point where the urethra holds the instrument most tightly as is indicated by the patients' sensations.

The strength of the current is regulated so as to produce only a very slight stinging or burning sensation, and this varies from two to five milliamperes. The application is continued about five minutes, and repeated at intervals of four or five days.

In this method dilatation is combined with electrolysis; and the result is undoubtedly better than when either is used alone

My experience has convinced me that electrcity used in this way is a valuable auxiliary to the treatment of stricture by dilatation, and on the other hand that it does not possess the magical resolvent power in the urethra which some writers claim for it, independently of simultaneous dilatation. It also exerts a very salutary influence upon the irritable condition of the whole genital tract which so often accompanies strictures, as it is so well known to do in similar conditions of the genitals in the female.

Aside from these effects I have not been able to discover any advantage in the use of electricity in the treatment of stricture.

Dan'l B. D. Beaver, M.D.
Reading, Pa.

ELECTRICITY has, with me, become a routine treatment for strictures of all kinds, urethral, rectal, cervical, etc.

I employ various forms of electrodes, some of my own invention, but I find one just about as good as another, provided it is properly placed and the active portion is of a conical shape.

I use a low ampereage not exceeding 5 ms. Have never had any unpleasant consequences, and am pleased with the results.

I have nothing to add to the rules for

this application of electricity, which are already well-known to the profession, and it would be useless to waste space recounting cases devoid of special interest.

R. G. NUNN.

SAVANNAH, GA.

I HAVE no faith whatever in the value of electricity in the treatment of urethral strictures. I have, I confess, never made use of electricity for this purpose, because it is out of my line of practice. But from my skepticism as to its value in chronic and incurable disorders of the central venous system, it is but a step to be skeptical as to its value in inflammatory or sclerotic processes elsewhere. I should as soon think of hanging a magnet to a penis to cure the stricture as to employ electricity.

F. PETERSON.

NEW YORK.

MY experience with electricity in urethral stricture is limited to one case in which I used 25 milliamperes for 10 minutes on three consecutive days in stricture near the meatus. The negative current was used. The stricture admitted only 14 French. After treatment 28 Fr. passed freely.

J. M. HAYS, M. D.

OXFORD, N. C.

RAILWAY SURGERY.

THE *Medical Record* of December 17 contains an editorial on "Railway Surgery." It is really edifying to see the editor of the *Record* make such final disposition of railway surgeons. The editor is correct when he says that "a fracture, a sprain, a lacerated wound, cannot have any specific qualities because they were produced during a railway collision." But in the sentence following we cannot agree with the writer, believing that the man who is to do railway surgery needs special training for the work. Our surgeons of to-day receive their patients on the table ready for the operation with a staff of assistants about them, and everything that science can suggest to make their efforts successful. How often does the railway surgeon of to-day find himself compelled to operate at the scene of the wreck, and is his patient ever brought to him on a clean table by half a dozen clean assistants? No, the railway surgeon often finds his patient pinned down by portions of the wreck, or under his engine in the ditch. Here then he must have a cool head and use tact and judgment in improvising such measures as are necessary to meet the demands of every case. "He is not an independent professional man, but is the employee of a corporation and the servant of the same." Truly the railway surgeon "is not *independent;*" "he is an *employee*" and "a *servant*" in exactly the same sense as any other practitioner is when he examines a patient in his office and prescribes for him and no more. Railway surgeons are paid for services rendered the same as other surgeons. Finally, "associations of railway surgeons have, therefore, their special function in studying the business part of their profession, not the scientific." Certainly the writer of this editorial could not have visited the last meeting of the New York State Association of Railway Surgeons, where one of the most scientific programmes of the day was carried out. Of late we had the pleasure of looking over the programme of the next meeting of the National Association of Railway Surgeons, to be held at Omaha, Neb., next May, and find that thirteen papers are being prepared on a special topic: "*Injuries to the Cord and Its Envelopes, Without Fracture of the Spine,*" by such surgeons as N. Senn, of Chicago; Geo. Chaffee, of Brooklyn; W. B. Outten, of St. Louis, and others of national reputation. Railway surgery has come to stay. It has taken firm root in the East. Dr. Chaffee, of Brooklyn, has the reputation of finishing whatever he starts out to do. It is not difficult to read between the lines of his address, an abstract of which appears in this issue, that when the proper time comes he will be the leader in establishing a railway hospital in New York City, and as the doctor shows his friends through the wards they will have a chance of seeing for themselves that there is such a thing as "railway surgery."

The Medical Digest.

FORMULARY.—1. Fissures of the nipple:

Tr. benz. comp	15 drops
Olive oil	2 drs.
Lanoline	6 drs.

Apply after nursing.

—*Thomas.*

2. Ulcers:

Powd. camphor	100 grs.
Subnit. bismuth	400 grs.
Salicylic acid	400 grs.
Iodoform	1100 grs.

Reduce to fine powder. Apply to ulcerated surfaces.

—*Rev. de Clinique.*

3. Pulmonary Phthisis—Masche:

Eucalyptol	20 parts
Creosote	8 parts
Alcohol 90%	72 parts

One to two teaspoonfuls in a pint of water. Use as inhalation.

—*L' Union Med. du Canada.*

ALTERATION IN CHARACTER OF CONDENSED MILK.—Cassedebat (Rev. de Hygiene). Certain samples presented the form of a paste, of a cheesy consistency, and a rancid odor and taste. Bacteriological examinations giving negative results, the change appears to be a consequence of physical causes, brought about by the evaporation of the liquid portions, from a defective can. The author proposes to substitute for the metal can, a glass box, and to close it by a sterilized cork, covered with some substance impenetrable by air and moisture.

THE PRACTICE OF MEDICINE IN CHINA.—The day of a Chinese physician commences at day-break. He receives patients. At 10 A. M., he goes to visit patients whose names appear on his slate. The patient hangs up at his door a placard containing the name of his doctor, a proceeding rendered necessary on account of the want of house numbers. The physician is received with the greatest reverence, he is offered tea, a pipe, etc., before examining his patient. If the patient is a male, he seats himself in front of him; if a female, a bamboo screen is interposed, which is withdrawn when the physician wishes to examine the tongue. The right hand of the patient is extended on a book, and the physician places three fingers on the pulse, and counts it without using a watch. The operation is then repeated on the other hand. He (the doctor) then asks other questions, and then a pen and ink is brought. The prescription is written, consisting chiefly of vegetable drugs, and then carried to the apothecary. If the patient be a mandarin, or wealthy, the diagnosis, prognosis, treatment, etc., is given in writing; otherwise, verbally. The fee is wrapped in red paper, and varies according to the station of the patient. If the physician is not successful, a consultation with one, or several, takes place; and if the patient then gets no better, the aid of a divinity, possessing curative powers (?) is invoked.—*Rev. Gen —La France Med.*

THE ANTISEPTIC TREATMENT OF ACUTE METRITIS.—Labadie-Lagrave.—There are two indications to be fulfilled. 1st. To re-establish the calibre of the cervical canal, obliterated by the inflamed mucous membrane. 2nd. To realize uterine antisepsis.

For the first indication, commence by rendering the vagina antiseptic by injections of sublimate solution (two per cent), twice daily (b). Dilatation with antiseptic laminaria tents, followed by an antiseptic irrigation, and tamponing with sublimate cotton. This dilatation, etc., to be repeated daily until the canal is re-established.

Second indication, to realize uterine antisepsis.—For this end, daily tamponing with strips of iodoform gauze, moistened with creosoted glycerine.

This method is applied only in recent and acute metritis where it is possible to bring the antiseptics in contact with the mucous membrane at all points. Otherwise, curetting will be indicated.—*Jour. de Med. de Bordeaux.*

HYPOPHOSPHITES IN TUBERCULOSIS.—Without fear of contradiction, it may be asserted that tissue building—the establishing of healthy cell life—is the foundation treatment of every case of tuberculosis, not only in the incipiency, but in the advanced stages as well.

This proposition is not antagonistic to the germ theory; rather has the

knowledge of the existence and important role of the bacillus led us to a better understanding of the necessity of proper nutrition.

Nutrition is a *sine qua non* in all cases of tuberculosis. In some instances its necessity is more evident than in others; in acute cases other needs may be more urgent, but the rule holds good, the tuberculous must be nourished.

Feeding is not nutrition. The best of diet may not be assimilated—may do harm rather than good. The practice of stuffing, so honestly advocated by some authors not long ago, has been rapidly abandoned. Years ago every case of phthisis got a bottle of cod-liver oil; now it is given only to selected cases. Nutrients are chosen which can be approriated and the food is given in such a manner and of such kinds as may easily induce complete assimilation.

There must be a demand for nutrition before assimilation can be satisfactorily performed. There must be the ability to appropriate food that is taken, else the defective cell in a remote part of the system will profit little thereby. Just here, I believe is an important point in the treatment of tuberculosis. The best of food and the most reliable nutrients are taken and still the waste, in many cases, goes on. There is either want of assimilation, or a want of gain from the process.

There is need for "respiratory food" as well as for that in the alimentary tract. Oxygen must be taken into the system and the cells empowered to use it in the nutritive changes which we aim to accomplish by proper feeding. Deep breathing—pneumatic devices, and the inhalation of oxygen, may do much to supply this element of nutrition, but not infrequently the system seems as unable to appropriate oxygen as it is to utilize the food which passes through the stomach and intestines. Whether the lessening of tissue oxidization is due to a diminution of oxidizable phosphorus(Churchill), or to cell change, or to some other cause, the lessening of nervous energy is certainly a factor in the hindrance of oxidation and consequently of assimilation. Indeed some authors (Holland and others) claim that pulmonary consumption is a neurosis. At any rate, if oxygen gets no further than the lungs, and food no farther than the alimentary tract, there can be no assimilation, no building up and tearing down, no hindrance of destructive change and repair of injury.—Porter, *The Clinique*.

A New Treatment of Hemorrhoids.—A Holland physician, Dr. Aghina, treats this complaint in the following manner: Fix at the extremity of a female sound a condom, and at the other end a rubber bulb furnished with a stop-cock. After carefully cleaning the rectum by washing and a purgative of citrate of magnesia, let the patient recline on the bed for some hours. Then introduce the catheter, covered by the condom, into the rectum, in such a manner that it penetrates above the internal sphincter, then the membranous bag is inflated with air and the stop-cock closed. The dilated veins are compressed by the distended bag, and they soon, according to M. Aghina, take their normal volume, provided the compression is maintained for a sufficiently long time. This operation should be repeated after each defecation, and the patient should rest in bed for fifteen days at least. The author has obtained excellent results by this proceeding, and he does not hesitate to discountenance, in the treatment of hemorrhoids, all surgical intervention which is not justified by the urgency of the case.—*Med. Abstract.*

Anodyne Granule for infants:

Nickel bromide, gr. $\frac{1}{134}$.
Codeine sulphate, gr. $\frac{1}{134}$.
Powdered ipecac, gr. $\frac{1}{134}$.
Lithium carbonate, gr. $\frac{1}{25}$.
Oil anise, gr. $\frac{1}{124}$.

Directions:—One or two every fifteen to thirty minutes, till effect.

Nervine Granule:

Gold bromide, gr. $\frac{1}{250}$.
Arsenic bromide, gr. $\frac{1}{250}$.
Ext. aloes, purified, gr. $\frac{1}{134}$.
Nickel bromide, gr. $\frac{1}{16}$.

Directions:—"One or two every twenty minutes until quieted in 'nervousness;' two to six every four hours for grave neurotic cases, to be stopped for the balance of the day when fullness of the head, fever, or tenderness of the gums is felt."—Waugh.

Among cutaneous affections for which electrolysis may be advantageously employed, Bowen (*Boston M. & S. Jour.*) enumerates dilated and hypertrophied blood vessels, so-called "spider-cancers," small angiomata, telangectasis, rosocea, port-wine marks, moles, freckles, warts, scleroderma, keloid, hypertrophied scars, xanthoma and lupus.

Prince employs the positive pole, with an iride-platinum needle, for port-wine marks. His method is as follows:

The technique of the procedure is as follows: the needle connected with the positive pole is thrust into the true skin parallel with the surface for a distance of one-half to one inch; the skin is "threaded" or skewered, as it were, by the needle. The negative pole is placed in the hand, and the current is then gradually turned on until from two to three milliamperes are recorded. It is now necessary to watch with great care the changes in the skin over the needle. The first change to be noticed is that the track of the needle is marked by a sharply defined white line, the red or purple colored skin directly over the needle becoming blanched by an apparent contraction of the blood-vessels. Presently, in the course of a few seconds it will be observed that little dark dots appear in this white line,—at first one or two, then more which soon coalesce, and the track of the needle becomes marked by a black line due apparently to coagulated blood. If the process be not stopped at this point but be carried still further, the tissue swells, and the epidermis may be raised as a vesicle and much inflammatory action and necrosis may follow.

It is, therefore, important to stop the process at a point when as little inflammatory action as possible has been produced. The best guide for this is the appearance of the dark blackish dots. When a number of these have formed and before the whole path of the needle is marked by the discoloration the needle should be removed. It will then be found that the process will continue for a few minutes after the removal of the needle until the track of the needle is marked by a dark brown line. All depends on the electrolytic process being suspended at the right point, otherwise either the results will be insufficient or damage will be done. It is not possible, of course, to accomplish this destruction of the vessels without producing some inflammation but a slight amount of inflammation does not result in scar-tissue formation. Everything in this respect depends upon the skill and judgment of the operator. The needle should not be inserted again near the same place for two or three weeks until the healing process is completed. At the end of this time it will be noticed that the track of the needle is marked by a yellowish colored skin. This yellow color fades with time until the color approximates that of the normal skin. The color never, perhaps, quite matches that of the neighboring skin for reasons which will be later stated, but the red injected appearance is removed.

Great care must be taken in calculating the distance by which these parallel lines shall be separated. The distance should be such as to be a multiple of the width of the resulting white line, otherwise it will be difficult not to leave streaks of discolored skin between the needle marks. Great care must also be taken at subsequent operations in determining the exact point at which the needle should be inserted next adjoining the preceding needle mark. Upon determining this with accuracy largely hinges success. To do this it is necessary to know the exact width of skin that will be destroyed by any one needle. This can only be learned by practice. Another matter of great importance is this: the parallel lines must be separated by an interval which will render it impossible for the secondary inflammation bounding two lines to coalesce. If the lines are placed too near together ulceration and scar tissue are sure to result.

Treatment of Uterine Hemorrhage by Intra-uterine Electrolysis of the Salts of Copper.—Delineau, reports a dozen patients cured by this treatment. Of these one had been twice curetted without benefit and one had suffered for three years from hemorrhage caused by large fibroids. The treatment not only arrested the hemorrhage, but eliminated the tumors. Delineau believes that intra-uterine electrolysis of the salts of copper will give remarkable results in all cases of uterine hemorrhage; symptomatic of endometritis, or fibroid tumors.

It possesses the following advantages:

1. It is applied easily without anesthesia, and without assistants. 2. The patient is compelled neither to go to bed, to keep her room, nor to give up her usual occupations. 3. The current is weak, therefore without danger. 4. Pain is easily and permanently relieved at the beginning of the treatment There is no fear of septic complications. —*Gazette de Gynecologie.*

The Times and Register.

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Original Articles.

ON CONGESTION OF THE LIVER.

By PROF. DUJARDIN-BEAUMETZ.

[Member of the Academy of Medicine. Physician to Cochin Hospital.]

PARIS, FRANCE.

CONGESTION of the liver is a symptom of a great number of diseases. I desire, then, to set forth as methodically as possible the etiology and pathogeny of these hepatic congestions, for they are affections which demand a kind of treatment directed to their cause.

In the symptomatology of hepatic congestions there is a symptom which occupies the first place, viz: the augmentation of volume of the liver. We can detect this increase of size by percussion and palpation.

I cannot but regard percussion as a very untrustworthy means of judging the increase of size of the liver. Many causes modify the lines of dullness of the liver. On the part of the liver itself, there is the tendency of the organ to tilt back and forth according to the position of the patient; we had an example of this the other day at the Academy, in a patient whom Gerard-Marchant showed us, where it was necessary to fix the liver *in situ* before its size could be determined. This see-saw movement of the liver accounts for the fact that sometimes on percussion we fail to detect augmentation of volume, and the autopsy performed subsequently shows the liver to be enormously enlarged.

Another cause of mistake pertains to the lung and intestine. Without speaking of pleurisy with effusion, of which the dullness is continuous with that of the liver, I may mention emphysema, which crowds the liver downwards in depressing the diaphragm and renders percussion of its posterior part very difficult.

On the part of the abdomen, pneumatosis of the stomach or intestine often makes it impossible to tell the exact limits of the liver.

These causes of mistake detract much from the importance of percussion in the attempt to define the inferior border of the liver.

We can really learn much more from palpation. But, in order to make the most of this means of exploration, you must require the patient to make full inspiratory movements, which force down the diaphragm and, along with it, the liver; then, with the hand applied over the abdomen, you may be able, owing to the relaxation of the abdominal wall, to penetrate beneath the costal margin, and make quite a satisfactory exploration of all the lower border of the liver.

At the same time, there are cases, where, despite this method, one is balked in the effort at exploration; it is when the bor-

der of the liver, instead of being applied to the abdominal walls, curves inward and is directed toward the posterior part of the abdomen.

Here you adopt Glenard's method. You not only endeavor to depress the liver by movements of inspiration, but you attempt to bring it forward to the anterior part of the abdomen.

The physician sits on the right of the patient's bed, facing the latter; the left hand grasps the right hypochondrium and loin, and the hand is so placed that the thumb is situated anteriorly, while the other fingers, placed behind, endeavor to push the liver forward towards the anterior wall.

As for the right hand, this is applied over the abdomen upon the median line, and endeavors to keep the entire region of the hypochrondrium on that side immovable.

Whenever therefore by simple palpation, you cannot succeed in exactly mapping out the lower border of the liver, you can put in practice the method of Glenard.

As for the general symptoms, some are quite characteristic. If in certain cases congestion of the liver is not accompanied with pain, in others the patients suffer in the hepatic region from darting, stabbing pains, or at least considerable discomfort in making strong inspirations.

There are also sensations of tearing or of constriction in the thorax under the xiphoid appendix when the patient assumes certain positions, and these symptoms do not depend so much on congestion of the liver itself, as on the peri-hepatitis which accompanies such congestions. Adhesions are formed around the liver, which cause these sensations of constriction in the thorax, and this especially happens when the liver tends to regain its ordinary volume.

Another very constant symptom is the modification of the urine. We may affirm that there is never a congestion of the liver without the appearance of urobilin, to which is joined bilirubin. Hence a careful chemical and even spectroscopic examination of the urine is necessary to complete your diagnosis of congestion of the liver.

To this alteration of the urine, we may add as elements of diagnosis a well-known modification of hue; the eyes have a slight brown color as well as the mucous membranes. Sometimes even there is a veritable icterus; but generally it is only this subicteric tint that you see in hepatic congestions. To these three cardinal symptoms: augmentation of volume, pain in the region of the liver, presence of urobilin in the urine, we must add the febrile symptoms.

Monneret, who has written much on this subject of hepatic congestions, insists on the remittent and intermittent type of the febrile phenomena in these congestions. This is, he thinks, a characteristic sign of these congestions.

To-day we have to modify this view a little, and if in hepatic congestions we frequently remark intermittent febrile phenomena, this is caused much more by infection of the liver than by congestion.

I have already told you in a former lecture that in the physiological state the bile contains no micro-organisms, and this, despite the intimate relation between the biliary passages and the intestine. But in the pathological state, the microbes penetrate the bile ducts and infect the liver. It is then, to this penetration of microbes that we must attribute those intermittent phenomena which sometimes take on a character of great gravity, constituting veritable attacks of pernicious fever.

By the side of these symptoms, there exist others which are quite important, and may be regarded as secondary symptoms. Thus we note an augmentation of volume of the spleen, troubles more or less important in the circulation of the portal vein and particularly the production of hemorrhoids. The presence of hemorrhoids in affections of the liver is a fact well known to the ancients.

The cardiac circulation may itself be troubled, and Potain has shown us what modifications are produced in the right heart in patients suffering from chronic affections of the liver.

Lastly, the digestive functions are themselves perturbed, and there results, in patients affected with hepatic congestion, a bad state of the general nutrition which entails a rapid emaciation and a very notable enfeeblement of the forces.

There is a secondary trouble which has considerable importance in therapeutics,

viz. : the production of certain hemorrhages and particularly of attacks of epistaxis. At the close of this lecture I shall refer to this subject again.

Some authorities, as Poncel and Glenard, have had much to say about the influence of congestions of the liver on the genesis of disease, and the former would make almost the entire pathology dependent on hepatic congestion. On the other hand, while some exaggerate the rôle of congestion of the liver, others, I think, make too little of it. In some recent treatises on hepatic affections, congestion of the liver is hardly treated of at all; thus, in the excellent treatise of Labadie-Lagrave, the chapter devoted to congestion of the liver is very short and is simply a chapter of etiology. I have the same criticism to make on the remarkable monograph of Chauffard in Volume III. of the *Traité de Medicine*, in which he discusses diseases of the liver and bile ducts; he occupies himself almost exclusively with the cardiac liver, *i. e.*, passive congestions. I believe that the truth lies between these two extreme opinions, and this is what I shall endeavor to demonstrate as I go on.

Before coming to the treatment, I must speak of the etiology of these affections and of their pathogeny.

Many divisions have been proposed in order to group together methodically the different causes of hepatic congestions; the division which I propose is the following:

In the first class I shall place those congestions which have for their starting point the digestive tube; these are congestions of gastro-intestinal origin. This group is much the most numerous and we shall have to establish a number of sub-divisions in order to be able to study them in their entirety.

In a second class we shall study congestions of infectious origin; hepatic hyperæmia connected with the infectious diseases, with malaria, will be ranged in this group.

In the third class, we shall place the diathetic congestions, *e. g.* the hepatic congestions so frequent in the arthritic.

In a fourth group will be found the congestions of mechanical origin, whose type is the cardiac liver.

Lastly, one might in a fifth class range the hepatic congestions which result from a local cause, or which precede the inflammations of the liver; wounds of the liver, the foreign bodies of this organ, hepatitis, etc., belong to this group. But as this class does not demand special consideration from a therapeutic point of view, I shall simply mention it *en passant*, and shall now take up the study of the first group.

The hepatic congestions of gastro-intestinal origin are the most interesting, especially from a therapeutic standpoint.

In order to study them well we must make the three following sub-divisions : 1. The congestions of purely alimentary origin; meats too excitant, aliments badly masticated, alcoholic liquors, etc., belong to this group. 2. The congestions due to toxines, whether these toxines result from bad functioning of the digestive tube, or whether they depend on the aliment itself. 3. Poisoning by lead, arsenic-phosphorus, etc., which determines congestive phenomena of the hepatic gland.

Let us examine briefly these three sub-divisions. One of the most frequent causes of hepatic congestion is excess in eating, and we may say that all high livers and all great drinkers are subject to these congestions.

In countries where the inhabitants eat to excess; in Germany, in Russia and the departments of the North of France these congestions are very frequent. They are also often observed at the sea-side in persons who frequent the different maritime resorts during the summer time. Thanks to the exercise taken and the keen bracing air, the appetite notably increases, and by reason of the full, rich diet of these sea-side hotels, these summer visitors rapidly have congested livers.

This congestion is the rule, when, to the conditions I have enumerated, is conjoined a high temperature, as in all tropical climates.

Rapidity in eating and incomplete mastication, by favoring gastro-duodenitis, also predispose to congestion of the liver, by the intermediation of the bile ducts, which become inflamed.

But alcohol is incontestably the most frequent exciting cause. You well know that all liquids introduced into the digestive tube are absorbed by the radicles of the

venæ portæ and traverse the liver, and that any and every irritant liquid may be a cause of congestion of that gland.

It is in this way that lead, arsenic, copper, and other poisons, by fixing themselves in the liver, determine temporary or chronic congestions of that organ. In the same way congestions are brought about by the absorption of toxines concontained in the food; spoiled fish, tainted game, stale salads, etc., are causes of congestion of the liver, which may sometimes take on great intensity. These congestions are easy of explanation; they are a simple consequence of exaggeration of function of the hepatic cells.

In other cases, the toxines which cause the congestion do not come from the food, but are produced in the gastro-intestinal tube by reason of its imperfect function. It is to Bouchard that the merit belongs of having first pointed out the predisposing influence of intestinal dilatation in the production of congestions of the liver.

The vicious fermentations which result from dilatation of the stomach lead to the formation of putrid products, which are absorbed at the surface of the intestine and irritate the hepatic cells.

Quite as important a rôle should be attributed to the large intestine. It is especially in the formation of fæcal matters that the absorption of those putrid products is most readily effected; products which determine a series of pathological symptoms to which Bouchard has given the name of *stercoræmia*. This absorption is hastened by the loss of the epithelium and by the ulcerations which are produced on the surface of the mucosa. It has long been known that in dysentery the ulcerations are the point of departure not only of congestions of the liver, but even of suppurative hepatitis.

Typhoid fever forms an intermediate group in which we find as causes of congestion of the liver both local alterations of the intestine (the ulcerations of Peyer's patches) and the presence of a special microbe in the economy.

In the description of the forms of typhoid fever which Chedevergne has given, he has described an hepatic form. There are in fact cases of typhoid fever with marked congestions on the part of the liver. It is a true bilious form of typhoid. But it may also be said that most infectious diseases may be accompanied with congestion of the liver.

Since Laveran has shown that special organisms develop in individuals affected with malaria, we must include in this group of infectious congestions the hyperæmia which is caused by malaria. It may be affirmed that there is never a case of profound marsh-poisoning which is not accompanied with congestion of the liver. This is a most frequent cause of congestion in the warm countries of Europe.

Certain diatheses are a cause of congestion of the liver; these are dyscrasic causes. Thus, in the arthritic and herpetic, we find frequent congestions of the liver. These patients are liable to dilatations of the stomach or to attacks of gall stone colic, and it may be pertinent to ask if these congestions may not depend on one or the other of these causes?

Every patient suffering from an organic affection of the heart, the muscular walls of which can no longer suffice for the task which is imposed upon them, has congestion of the liver (the so-called *passive* or *mechanical* congestion), which results from stasis of the blood in the right auricle and by propagation in the inferior vena cava.

The affections of the right heart entail this mechanical congestion. In tricuspid insufficiency, this congestion is the rule. But there cannot long be a left-sided valvular disease without similar mechanical congestion, for the aortic or mitral lesion causes stasis in the lesser circulation, which soon brings on distention of the right heart and all the mechanical troubles of which I have spoken. All asystolic patients have that subicteric tint so characteristic of hepatic congestion, and they have weight, and pain, and tenderness over the region of the liver.

In his description of the cardiac cycle, Peter has well shown the influence of congestion of the liver on the production of that general state called *cardiac cachexia*, and he has shown how the disease, from being first absolutely local, becomes finally general.

Under the head of treatment, I should

first consider that which is addressed to the first cause of the hepatic hyperæmia, then the treatment of the congestion itself; and here the general division into active and passive hyperæmia will be convenient.

For active congestions, we have the following therapeutic resources: (*a*) revulsion, (*b*) intestinal antisepsis, (*c*) dietetic regimen.

There has of late been much dispute as to the value of revulsion, and in the recent discussion respecting the treatment of pleurisy, you have seen how divergent are the opinions of physicians concerning the utility of the blister in this affection. For my part, I am a partisan of the vesicatory in pleurisy in certain stages and I believe firmly in its utility and that of other revulsives in the active congestions of the liver.

If you employ vesicatories, use large ones; I believe also that punctiform cauterizations are useful in some cases. Cupping has also been advised; our fathers made much use of leeches. These are confessedly means which have gone much out of date.

By the side of revulsion, I place hydrotherapy, which is an admirable method for obtaining resolution of chronic congestions of the liver. In malarial patients with large liver, and in the hepatic congestions of hot climates, local douches over the liver produce a favorable action.

All the hydriatic means may be put in usage. Percutent douches, circular douches, the wet pack, cold compresses, alternant douches, Scotch douches, etc. —only it needs great prudence and a very experienced hand to direct this hydrotherapic treatment, for by douches administered too harshly, you may augment instead of reducing the congestion of the liver.

Cold lavements have long been used in cases of congestion of the liver. It seems demonstrated that these lavements augment the secretion of bile and decongest the liver. I am in the habit of adding to the cold lavements an antiseptic, naphthol alpha, for example, in the dose of about five grains to the quart.

In order that these lavements may have their complete effect it is well to make use of Cantani's method, and to employ the enteroclyser. The apparatus which I use was made by Galante, but an ordinary fountain syringe will answer the purpose very well. The long rectal tube should be inserted, and as high up as possible, and the patient should lie on his back with the hips somewhat higher than the rest of the body, and the fountain or bag containing the naphthol water should be elevated as high as possible that there may be a continuous steady flow.

At least a quart of liquid should be employed for each lavement, which should be kept up a few minutes, and then voided. In all cases where the congestion of the liver is associated with constipation or other troubles of functions of the large intestine, these irrigations are obligatory.

Are there any medicaments which have a decongestive action on the liver?

I do not think that there are, nor do I believe that we are in possession of a medicine having a special elective action on hepatic hyperæmia. But there are medicines which have a favorable action, indirect it is true, but none the less manifest, on these active congestions. These are the alkalies, iodide of potash and certain substances which promote diuresis.

The alkalines certainly favor the functions of general nutrition and combat congestions of the liver. It is upon this fact that are based the favorable results which are obtained from thermal alkaline waters. The success which has been obtained from the waters of Vichy, Marienbad and Carlsbad, and even from the cold waters of Vals are a certain proof of this action.

It is well to remark that the salts of soda seem particularly indicated here; the salts of lithia, on the contrary, so favorable in uric diathesis and in the renal affections, produce no effect in hepatic congestions.

Of course it is not the alkaline waters alone which are indicated in hyperæmias of the liver; all the mildly purgative waters, in decongesting the intestines and the portal system, may have a favorable action. I will mention in this connection, the waters of Chatel-Guyon; also those which are applicable to the primitive diathesis, as the waters of Roy-

at, Kissingen, Sainte-Nectaire, etc.

Iodide of potassium is a medicine favorable in certain hepatic congestions, and its resolvent action becomes strongly felt. In addition to the effect of the iodide on the circulation, it is certain that this medicine has effects on nutrition, and it is by this double nutritive and circulatory action that one may explain the happy results which are obtained from the iodide in hepatic congestions.

The action of other medicines is more questionable. Poulet (of Plancher-les-Mines) has vaunted hippuric acid, and has made a syrup of this acid of which the following is the formula: this he habitually prescribes in hepatic hyperæmia.

℞—Hippuric acid, pure . . 25 gr.
Milk of lime . . . . q. s. to neutralize.
Syrup . . . . . 500gr.
Essence of citron or anise, q. s.

Dose, from four to five spoonfuls of this syrup per diem.

I have sometimes obtained very good results from this syrup in certain cases; but it is by acting, I believe, as a diuretic that this favorable action of hippuric acid may be explained.

I may say the same of boldo, which I studied many years ago with Verne. Boldo, which has been much praised, especially in South America, in hepatic congestions, acts as a diuretic and should be placed in the same group as hippuric acid.

To all these agents it is necessary to add rigorous intestinal antisepsis, and this by means of special medicines and an appropriate dietetic regimen

Do not forget, in fact, that hepatic hyperæmia, by modifying the functions of the hepatic cells, destroys the antiseptic properties of these cells, so that the liver no longer constitutes that living barrier which in the normal state opposes the penetration into the organism of toxines absorbed from the surface of the digestive tube. It is therefore necessary by a special treatment to reduce to their minimum these toxines, and this treatment is based on antiseptic wafers (*cachets*), on the one hand and the vegetarian regimen on the other.

For these cachets you will adopt the two following formulæ; the first is applicable to hyperæmia of the liver complicated with diarrhœa:

℞—Salol . . . . . }
Salicylate of bismuth . . } aa 10 grammes.
Bicarbonate of soda . . }
Divide into 30 cachets.

The other formula, on the contrary, is designed for congestions of the liver acconpanied with constipation:

℞—Salol . . . . . }
Benzo-naphthol . . . } aa 10 grammes.
Bicarbonate of soda . . }
Divide into 30 cachets.

It is well understood that if the diarrhœa or constipation is very obstinate, you will substitute for the bicarbonate of soda, in the first formula, prepared chalk in the case of diarrhœa, and in the event of constipation, magnesia.

The rôle of laxatives in congestions of the liver is very important. Laxatives are, in the first place, the means for eliminating intestinal toxines; moreover, by the intestinal secretion which they provoke, they decongest the portal network; lastly, their cholagogue action, in favoring the flow of bile, produces also a favorable effect. It is, then, to the saline and cholagogue purgatives that you will have recourse; the sulphate of soda waters (Villacabras, Hunyadi-Janos, Rubinat); cholagogues, such as podophyllin, euonymin, cascara and its derivatives.

Calomel has been much vaunted both as a cholagogue and decongesting agent of the liver. In England it is the usual medicine in the treatment of hepatic affections. I confess that I have had little experience with calomel for the reason that I have always been afraid to use it. It has always seemed to me that in patients to whom I have given calomel for any considerable length of time, I have observed symptoms of hydrargyrism; and if calomel in large doses, of 7 to 15 grains, may exceptionally constitute a good laxative and purgative medicine in constipated hepatic patients, I believe that if we are to continue this purgative action, we must abandon calomel and have recourse to other cathartics.

As for diet this will be largely vegetarian; you will order milk, eggs, starches, green legumes or other fresh vegetables and fruits.

As for meats, you will prefer the rare-done juicy meats, such as are thoroughly

cooked and gelatinous; such as calves' head, lambs' or pigs' feet, beef *a la mode*, calves' foot jelly, mutton stew, "fricandeau" fowl with rice dressing (*poulet au riz*), and you will prohibit fish, mollusks, crustaceans, game, cabbage and old cheese.

In allowing bread you will require your patients to eat the crust instead of the crumb, and to use no drink but milk, water or a little white wine diluted with Vichy.

Such is the alimentary regime which you will prescribe for your patients who are affected with congestion of the liver.

Thus far we have been occupied only with active congestions and I must now speak of such as are passive. Here it is the heart which especially demands treatment. It is the weakness of its contractions which entails venous stasis in the liver, and if you can tone up this organ, you will rid the liver of its excess of blood.

All the heart tonics are indicated: digitalis and digitalin, strophanthus caffeine, etc. Since the writings of Potain and Huchard have shown us that the failures which we had previously had with digitalin were due to the small doses which we had been in the habit of employing, we have been obtaining good results from the solution of crystallized digitalin in the dose of one milligramme per diem. The formula which I use is as follows:

℞—Crystallized digitalin (soluble in chloroform) . . . . . 1 cent.
Alcohol at 90° . . . . . 9 gram.
Glycerine . . . . . 6 gram.
M.

Sixty drops of this solution represent one milligram digitalin. I give, then, three times a day 20 drops of this solution to asystolic patients. In this form I insist on the solubility in chloroform, which enables us to distinguish the French from the German digitalin; and as the latter is fifteen times less active than the former, you see the importance of well indicating the digitalin which you wish to employ.

Strophanthus also gives me very good results. I make use of the French 20 per cent. tincture, of which I give five drops twice a day, or granules of the extract of strophanthus, one-fourth milligram each, of which four a day are given.

Lastly, in certain cases of fibrous degeneration and sclerosis of the myocardium, caffeine, in subcutaneous injections, often does good. To this treatment it is necessary to add purgatives, and here it is the drastics that we should employ. Lastly, the vegetable regimen is important; Potain goes farther, and counsels the exclusive milk diet.

In conclusion, it remains for me to speak of the treatment of the secondary accidents which spring from hyperæmia of the liver, and I wish to say a few words about the treatment of hemorrhages by the application of revulsives to the hepatic region.

Galen, long before Fernel, had mentioned this favorable action of revulsives applied to the region of the liver in the treatment of epistaxis, and he taught that if the bleeding came from the right nostril, the revulsion should be made over the liver, and if from the left, over the spleen.

Gubler, Monneret, and others have also insisted on the frequency of nasal hemorrhages in hepatic affections. But Verneuil and his pupils the last few years have dwelt particularly on this point. In a communication made to the Academy of Medicine in 1887, Verneuil called attention to the treatment of certain cases of rebellious epistaxis by the application of blisters over the liver, and he cited in support thereof a great number of personal observations, going back to 1872. Since then many similar cases have been reported, particularly by L. H. Petit and by Harkin, both of whom arrive at this conclusion, that in patients affected with rebellious hemorrhages, it is necessary to examine with great care, the region of the liver, and even that of the spleen, and if there is reason to refer the hemorrhages to the one or the other of those organs, to apply revulsives over those regions according the practice of Galen.

These hemorrhages may, moreover, take place from the lungs instead of the nose, and even from the anus. Bear in mind that the energy and the duration of the revulsion should be in proportion to the intensity of the hemorrhage, and if the vesicatory does not suffice you must have recourse to punctiform cauterizations.

We have not as yet any satisfactory

explanation of this action of hepatic congestions in the production of these hemorrhages. In the discussion which was awakened after the reading of Verneuil's communication, Colin, of Alfort, proposed a mechanical theory based on modifications of the conditions of the circulation. For my part, I have believed that the functional troubles of the hepatic cell modify the hematopoietic functions of the liver, and that it is chiefly in altering the character of the blood that congestions of the liver favor hemorrhages. This view has also been supported by Harkin. Verneuil, on the contrary, thinks that it is by reflex action that revulsion does good in these hemorrhages. Whatever may be the view which you may adopt, the fact is none the less real, and one ought always to have it in mind when called to confront obstinate hemorrhages of the kind mentioned.

INTESTINAL ANASTOMOSIS WITHOUT MECHANICAL DEVICES AND CIRCULO-LATERAL ENTERORRHAPHY.*

By JOHN D S. DAVIS, M. D.

Birmingham, Alabama.

ANASTOMOSIS is unquestionably the best means for the restoration of gut caliber. No method of bringing gut ends together has yet been devised that can be relied upon to render the coaptation of the mesenteric margins safe and exempt from sloughing. The most reliable methods are unsafe and dangerous.

Experimentation has led me to the conclusion that while my anastomotic cat gut and horseshoe plates are the best mechanical device yet suggested, for the reasons given in my published papers, but I am thoroughly convinced that no mechanical aids are at all necessary. By means of the plates, the operation can be completed a little earlier but the results are no better. The technique of intestinal anastomosis without mechanical devices is as follows.

All the preliminaries as to the preparation of patient, parietal incision, etc. I waive, and will only describe the work on the bowel. In case of a resection of ilium, the resected gut and its mesentery are removed and the open ends of the bowel are each closed by means of a double running suture of silk. The intestinal contents are stripped back from each free end of the bowels for eight or or ten inches and the intestines handed to an assistant who holds the free ends in opposite side by side while the operator incises the two guts with a scalpel as far as possible from the mesenteric border, making an opening double the size of the caliber of the intestine. The assistant does not release his hold during the entire procedure but clamps the intestines sufficiently to prevent the return of its contents. After the openings have been made, the assistant slackens the parallel guts so the operator can make the outside safety sutures on the mesenteric margin before the coaptation of openings is made.

I am in the habit of approximating the bowels, serosa to serosa, without denuding the serous surfaces, as the handling produces sufficient contusion and outflow of plastic lymph for all practical purposes. I use the intra-loop sutures of silk and then continue the outside safety sutures clear around the anastomotic opening. If the running sutures are used, leakage may result from a draw, tear or giving of the bowel. If the interrupted sutures are taken, it will be impossible for leakage to occur. The free ends are anchored to the bowels by means of two or three interrupted sutures, and the mesentery closed by the same suture placed horizontal with the mesenteric blood vessels. In large openings on the convexity of the bowel, where I have been in the habit heretofore of closing by means of my horseshoe cat gut plates, I now close by means of intra-loop sutures (imitating the hinge) and making secure by means of the outside safety sutures which gives the same results and increases the gut calibre at the point of operation. In all operations for intestinal repair after resection, anastomosis should be resorted to. Whenever the bowels are brought together end to end, there is usually a disturbance of the blood supply at the mesenteric juncture to such an extent that sloughing in the majority of cases will occur. In the operation of circulo-lateral enterorrha-

*Presented at the Fifth Annual Session of the Southern Surgical and Gynecological Association, November 16th, 1892. Louisville, Ky.

phy[1] the bowels are approximated at the expense of the convexity of the bowel in such a manner as to increase the caliber of the gut to any extent desired, but it is an unsafe procedure. The operation recently devised by Dr. Briggs, of St. Louis, in which he turns back all the coats of the distal end of the bowel, except the mucous like a cuff and approximates by draw suture is not free from danger of leakage from suture fistula due to the fact that the sutures pierce all the coats of the bowel. While the omental graft may, in a great measure, lessen the risk of leakage, the danger is too great to recommend the operation as at all practicable. In fact, no operation that contemplates the approximation of the mesenteric border of the bowel is safe and reliable. The operation of circulo-lateral enterrorhaphy I formerly recommended from the fact that the intra-loop sutures are taken parallel to the vessel of the mesentery and the blood supply is not apparently cut off, but the risk is very great from cutting off the blood supply owing to the strain on the vessels. The danger is also due to the cutting out of the safety sutures at this point of the approximation. Dr. Briggs has introduced the method of keeping the bowel outside of the abdomen until repair takes place.

If a circular enterorrhaphy is done, by all means the bowels should be kept on the outside. Not for the reason he recommends, though, but because we never know when we are going to get a leak at the mesenteric approximation. Dr. Briggs brings the bowel outside because [2] peristaltic action of the bowel, in a great measure, is controlled and the muscular jerking relieved. The tissues at the mesenteric border of the bowel are so frail and delicate that it is almost impossible to make an outside suture sufficiently tight without cutting or tearing the tissues, and I cannot endorse any operation that requires a keeping of the bowel on the outside of the abdomen until reparation takes place. If, then, this is necessary, we had better make an artificial anus and close afterwards by a secondary operation. The only operation for closing the bowels end to end approximation, that theoretically recommends itself sufficiently to lead the operator to attempt it, is that of circulo-lateral enterorrhaphy,[3] in which the bowels are approximated at the expense of the convexity of the divided ends, which prevents constriction and enables the operator to make a caliber any size desired, but experiments with this operation by my brother have demonstrated that it is unsafe. In all operations heretofore, in which the intestines were brought end to end, all methods of suture would cause a constriction of the bowel at the point of union to such an extent that the caliber was incompetent for physiological purposes. Wherever the bowels are brought together end to end, there is usually a cutting off of the blood supply to such an extent that sloughing, in the majority of cases, occurs, but in the operation herewith described constricting of the caliber is an impossibility, but sloughing is rare. There has been a constant desire on the part of the profession to do away with the operation; but, so far, all efforts have proven useless. By anastomosis, the bowel can so easily be restored to its integrity, and with such little danger that any other procedure, as a substitute, would not be attempted.

Anastomosis is a procedure that is not only justifiable, but can never be easily done away with. There are certain conditions of the bowel in which resection is not to be thought of, and to render the bowel competent, a collateral circulation must be established; and to do this, there is no means that is so justifiable, available and easy as that of anastomosis. When we he have a stenotic condition of the intestines, it is always preferable to flex the bowel and approximate lateral rather than resect and restore the bow by end to end approximation. Too, t are stenotic conditions of the sto and bowels that result from ma growth and tubercular deposits, tating lateral approximation resection. We can approxim testines end to end in such

[1] See experiments of Dr. W. E. B. Davis, in Alabama Medical and Surgical Age, August number, 1892.

[2] St. Louis Medical and Surgical Journal for October, 1892. P. 215-218.

[3] Alabama Medical and Sur 1892. P. 292-294.

make the caliber any size we choose, but as stated the operation is unsafe and I describe it only to condemn its practice After the resection, the mesentery of the resected gut is left in situ, and the ends of the intestine are brought together by intra-loop sutures that are tied on the inside of the bowel. This suture is first made on one side and then on the other of the mesentery. They are continued in interrupted loops until the bowels on each side are approximated to about one half, then to increase the caliber of the gut an incision is made in the convexity of the approximated ends to any extent desirable or necessary to make the gut caliber large enough for all physiological purposes, and the corners trimmed off. After this incision is made the line of loop sutures is continued until the two slits in the bowels are approximated just as the ends of the bowel. The last suture is tied and then pushed inside of the gut by means of a needle or small pair forceps. After this, interrupted outside sutures are rapidly carried around the line of union approximating the serous surfaces beyond the needle openings made by the internal loop sutures. The bowel is lapped in the mesentery which has been trimmed from the resected bowel and is held by two or three interrupted sutures. The mesentery becomes ingrafted upon the bowel, doubly protecting the line of suture and prevents intussusception or invagination.

In gastro-enterostomy, the end of the bowel may be brought in direct contact with the stomach by these intra-loop sutures in such a way that the gastro-intestinal opening can be made any size desirable in gastro-enterostomy; if the intestine is very small, we have only to slit up the intestine and bring the lateral sides in union with the stomach.

The approximation in an entero-colostomy is made just as a gastro-enterostomy. In all operations of circulo-lateral coaptation, the mesentery, if possible, should be utilized for protecting the line of sutures. Whenever this is done, the mesentery is so shortened as to prevent the invagination and volvulous of the bowel at this point.

I have been able to succeed in protecting the bowel by the mesentery left from the resected intestine, but when I have been most careful and done the operations most satisfactorily, the leakage at the mesenteric junction has occurred and produced peritonitis and death. I am thoroughly convinced that any operation that gives so great a mortality as end to end approximation should never be resorted to. I have here only alluded to the operation, because I have heretofore, in my enthusiasm, recommended it, and now desire to place my condemnation on it as an unsafe procedure. The responsibility of recommending surgical procedures is very great, and an endorsement should only be given to such operations as have been thoroughly tested by experimentation.

THERAPEUTIC NOTES.

Translated by E. W. BING, M. D.
Chester, Pa.

POISONING BY ANTIPYRINE.—M. Guttman, five years ago, noted a case of poisoning by antipyrine, in a fifteen grain dose. The symptoms were great agitation, acceleration of pulse, disturbance of vision, and urticaria, lasting for two days. Recently a fresh case occurred to him offering a great resemblance to the first case. The patient was in profound collapse, and cramps of the legs, vomiting, hoarseness, imperceptible pulse, temperature 94°. It was considered at first a case of cholera, but as there was no diarrhœa, that idea was rejected. Following up the examination an eruption was observed on the chest and abdomen of miliary, dark, rose-colored spots, sharply defined but scarcely elevated. The patient complained of violent headache, ringing in the ears, and disturbed vision, loss of sensation in the fingers, and a feeling of "lead-like" heaviness of the tongue Poisoning was suspected; but the patient said that having been affected with bad headache for some years, he had used various drugs including phenacetine, without relief. Lately he thought of trying antipyrine. He took one gram and experienced some relief, but felt some vertigo and disturbance of sight He continued to take two daily doses of antipyrine of fifteen grains each. The sensory troubles increased. He had taken in all ten grams of antipyrine when he was found in the above con-

dition. Stimulants were used and he promptly recovered. M. Guttman advises small doses of antipyrine at commencement, to be increased if necessary.

ALUMNOL.—Heintz and Liebrich, who introduced dermatol (bismuth subgallate) into the materia medica, have continued their studies in that direction. The new compound, alumnol, which they have just presented, is more powerful than dermatol; it is in fact at once astringent and antiseptic, but the property that distinguishes it absolutely from similar bodies is that after having precipitated albumen, instead of forming with it insoluble albuminates, as, for instance, sublimate does, alumnol is redissolved in presence of an excess of albumen. This singular property, which it possesses equally with regard to gelatine, renders it of great advantage. Alumnol is formed by combining alumina with sulpho-naphtholic acid, and contains 5 per cent. of alumina and 15 per cent. of sulphur. It occurs as a white powder, very soluble in water; on heating, water will take up more than 40 per cent. and the salt is not precipitated on cooling. The reaction is feebly acid. Soluble in glycerine, less so in alcohol, and insoluble in ether.

The property which this body possesses of not forming insoluble compounds with albumen renders it of great service in the treatment of cavities or sinuses. The antiseptic power of alumnol, when used to destroy bacteria, is not very marked, but it exerts a restraining, or even preventive, action against the development of the microbes. A solution of 1 to 250 absolutely arrests the vegetation of various microbes. This body is on the other hand extremely astringent, but strong solutions, 10 per cent., are not caustic.

The toxical effect of alumnol depends on its astringency, when injected into a blood vessel, in consequence of the formation of thrombi; but in ordinary use it does no harm.

The indications for its use may be deduced from its chemical and physiological characters. It has given good results in the treatment of suppurating wounds, as a watery solution of from 5 to 20 grammes per thousand, if the wound is rather large; and stronger, if the reverse. Ulcerations, especially leg ulcers, are rapidly modified and even cured by dressing with a solution of from 3 to 6 per cent. It may be mixed with talcum or starch and used as a dusting powder.

When used in the treatment of affections of the skin, it may be employed as an ointment, 5 per cent. in eczema; psoriasis, etc., or it may be incorporated with collodion. It may also be used with advantage in gynecology, as injections, or as crayons, or ointments. It is valuable in gonorrhœa, used in strength of 1 to 2 per cent. of water, also in nasal or aural diseases.—*La Medicine Moderne.*

News.

The Quarantine Bill passed the House on January 23, and at that date seemed likely to pass the Senate.

The bill as it passed the House requires all vessels clearing for the United States to obtain from the Consul or Vice Consul at the port of departure a bill of health. The President is authorized to detail a medical officer to serve in the office of the Consul at any foreign port for the purpose of furnishing information and giving the bills of health. The Marine Hospital Service shall co-operate with State and municipal Boards of Health in the enforcement of the rules of such board, and the regulations prescribed by the Secretary of the Treasury to prevent the introduction of contagious and infectious diseases into the United States from foreign countries and from one State into another; but nothing can be construed to warrant a Federal official in relaxing State rules. On the arrival of an infected vessel at any port not provided with proper facilities for treatment, the Secretary of the Treasury may remand the vessel to the nearest national or other quarantine.

THE sudden death of Bishop Phillips Brooks has caused universal regret. The death appears to have been caused by heart failure, due probably to diphtheritic endocarditis.

A special number on Diphtheria is in preparation.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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SANITARY MATTERS IN PHILADELPHIA.

THE sanitary condition of the city, and the operations of the Bureau of Health, are matters of interest at all times, and of paramount importance at present. We are now having a breathing spell, while the frosts of winter have stayed the march of cholera. But every one knows the disease is only checked, not destroyed; and that the Spring will witness its recrudescence. Even now the occurrence of cholera on shipping in the Elbe indicates that the water of that river is still being polluted by virulent cholera germs; while in a number of French, Belgian and German towns, the continued outcropping of ioslated cases shows that the pestilence is still alive, and only waiting for the proper time to begin its career of devastation.

The course to be taken by it is not a matter of chance. Among the certainties of sanitary science is the rule that the better the hygienic condition of a city, the less likely is it to be invaded by epidemics. The seeds of infectious disease, and a suitable soil for their germination, are the two essential factors for the development of a pestilence. The exclusion of the invading germs by quarantine is always problematic, rarely successful; the alternative means of defence is fully within our reach. We can be clean if we will take the trouble. Every day of this time of respite should be spent in hunting out and cleaning up every nest of filth where disease germs may find a congenial home. For this work, the Bureau of Health is not alone to be depended upon; under its present organization. The difficulty lies in the limitation of its powers, the parsimony exhibited towards it by Councils, and the division of authority. Frequently, nuisances have been reported repeatedly by the inspectors, but nothing has followed. It is of very little use to report a nuisance, unless it is removed. People lose faith in the Board, when repeated notification leads to no real amelioration of the difficulty. Cases occur in which prompt action is urged; and the red tape is reeled out for weeks before the end is reached. When a nuisance is reported, the owner receives a notice to have it remedied within three to five days. Then the inspector calls to see if the notice has been obeyed, if not, he reports to the office; the report goes to the Chief Clerk, and from him it is returned to the Health Officer. If the cost of removing the nuisance be under $50.00, the Health Officer then may order the work done; at the end of six to eight days after the original report was made. But if the cost exceed $50.00, he must advertise for bids in three journals for ten days, adding 33 per cent. to the cost, open the bids at the next meeting of the Board, and can then enter into a contract to have the work done. In all, this will require about 25 days; and unless

the contractor is unusually brisk, a full month will elapse before the nuisance has been suppressed.

This state of affairs is due to the bad organization of the Bureau; for its personnel could not easily be improved. The Board cannot appoint an officer or expend a dollar for the most obvious emergency, without first obtaining authority from councils; an uncertain and dilatory method of dealing with a threatened danger. A typical instance of this difficulty occurred recently, in quarantining diphtheria cases. The Health Officer was notified that all bills for the year must be presented by Dec. 29. Many of these were for privy cleaning; items that cannot be estimated with accuracy, because no one can tell how large is the quantity that will be removed. The funds were running low, and as the law renders the Health Officer criminally liable for spending money in excess of the appropriation, he ordered the quarantine to be discontinued until the bills had been received and counted. This was done; and as there proved to be a small balance unexpended, the quarantines were restored.

The continued prevalence of diphtheria is not due to laxity of the Health Bureau, but to the narrow limits of their powers. Physicians are exceedingly negligent in sending in their reports. It is by no means unusual for cases to be reported only after the child's death; or after several weeks' illness, during which the other members of the family attend school and church, shop or factory; neighbors come and go unrestricted, and the disease has been propagated in a dozen different places before the report reaches the Health Officer. The law ordains that reports shall be made as soon as the diagnosis has been made; but the doctor may decline to diagnose during life! Or, he may maintain that the disease is not really diphtheria. One alleged physician treated three children who died within a week, of what he termed "malignant ulcerative tonsillitis," and never reported them. The house was a model of bad sanitation. If any means could be devised that would induce our city physicians to report their cases promptly, the greatest obstacle to the stamping out of diphtheria would be removed.

But this is not the only difficulty. Diphtheria does not spread by contact nearly so often as by other means. It tends to haunt houses, and to spread along filthy gutters and alleys. In inspecting over 3000 cases of scarlatina, typhoid fever and diphtheria, this conclusion was clearly warranted by the facts. Rarely could the affection be traced to direct contagion; but a filthy alley or gutter would carry it from house to house. The gutter is part of the street, and comes under the jurisdiction of the Highway Department. Any complaint as to a gutter, gorged with offensive matter, is received at the Health Office and transmitted to the Highway people; and is not likely to be remedied before the sick child is buried.

As to the alleys, the condition is even worse. The cost, per house, for cleaning an alley is but a few cents. To avoid instituting an infinite number of suits for trifling sums, it has been found advisable to utilize the disinfecting tank procured last summer. With this apparatus over 8500 filthy alleys, gutters and back yards, and over 8300 foul cesspools, have been disinfected. But within a week the nuisance will be reproduced. The Health Officer should have authority to have all nuisances corrected at once; and to have those due to negligence inspected regularly, and penalties imposed on those who allow nuisances to form on their premises. The same observation applies to the gutters, alleys, back yards, empty lots, and cellars; once reported as in filthy condition, they should be in-

spected weekly thereafter, until the people concerned have acquired habits of cleanliness.

The entire absence of public urinals renders the fouling of alleys inevitable. We will not dilate upon this subject, knowing well that any movement towards supplying the city with these well-named *necessaries*, would be met by the united forces of the saloonocracy. But how the city is to be kept clean without them is a question for our city solons to answer next Spring.

It is evident from repeated publications in the *Ledger*, that there is an agitation in favor of a Diphtheria Hospital on foot. The absence of any method of properly separating the various cases treated at the Municipal Hospital, shows that building to be unfit for its purpose. A special diphtheria hospital would only partially meet the difficulty, and that not in the best way. What we need is a municipal hospital such as New York has, on North Brothers' Island, with separate pavilions for each disease, and a detention hospital for suspected cases, or exposed individuals. The present municipal hospital is situated on ground needed for residences. It is a hindrance to the development of a large and valuable section of the city, and its removal is earnestly desired by its neighbors. There is not a ward in the city that would not oppose most energetically the location of the hospital within its limits. The most eligible site is undoubtedly Petty's Island. The present hospital grounds could be sold for enough to purchase this island, and erect on it all the buildings required for a complete, modern hospital for contagious diseases, with a central administrative building, radiating wings for various diseases (built of wood, so that they could be burned when necessary), and suitable quarters for persons under observation. The isolation best attained on an island, the ease with which patients could be conveyed there from vessels without traversing the city, and many other considerations, favor the location on Petty's Island.

If we expect an administration of the Health Office as efficient as that of New York, we must invest our Board with equal powers, and increase its resources far beyond the present narrow limits. Meanwhile, it is folly to find fault with officers for not doing what they are not empowered to do; and until this change has been made, the citizens should take the matter in their own hands, by the formation of block sanitary committees.

THE MEDICAL EXAMINERS' BILL.

WE give in another department the full text of the Medical Examiners' Bill, to be presented to the Legislature this Winter. It will be seen that the Board is to be appointed by the Governor, who is not restricted in his choice by any question of schools or pathies. The only examination on drugs is that upon toxicology, which is about as good a solution of this vexed question as could be reached. The bill is an eminently just one, and we fail to find any objection to it that can fairly be urged by any school. Of course, the Governor may appoint all the members from the homœopathic, eclectic, or hydropathic ranks, or from our own number; but it is unlikely that any discrimination will be shown. Commenting on the proposed law, the *N. Y. Medical Times* says:

"We do not see what more could be asked by any school of medicine than this, in the way of protection of its rights.

"There are good honest men on both sides of this controversy, men to be trusted, but they have no confidence in each other. Each party feels that the other is trying to gain improper advantage, and how to get over this complica-

tion is the question. If the leaders on both sides could know each other better, it would certainly tend to promote confidence and harmony. If the homœopathists could be satisfied that their scheme of therapeutics was not in danger, they would be less suspicious. The dominant school would be satisfied, no doubt, with the wiping out of all sectarian designations:

"The records show 8248 physicians in the State. Of these, 6240 are denominated "regulars" for the sake of comparison: the sectarians number 1075; those practicing without diplomas, 933. The homœopathists claim 691, and the eclectics, 293. It must be evident to any one that a board consisting of three members from each school, would not be justified by the above ratio.

"It is well known what the result would be were there three distinct boards, the least qualified students would get through the weaker board as was the case in this county some years ago.

"It is the wish, so far as we know, of all medical men in good standing, who have the best interests of the public welfare uppermost, that each State shall have a Board of Medical Examiners before whom all candidates shall be examined, and the method to bring about this result should be made as simple as the circumstances will allow, and each school should be anxious that no injustice is done to any."

We trust that this view will be that adopted by all branches of the profession, and that the bill will pass without opposition. It does seem as nearly perfect as it is possible to get it, and should have the support of every person really interested in elevating the standard of medical education. For years, however, the sectarian practitioners have shown themselves able to manipulate certain political influences so as to defeat any bill that did not place the entire control of medical education and practice in their hands; and it is likely the same influences will be exerted again.

Letters to the Editor.

CHOLERA—RAG—QUESTION:

AND DISCIPLINE OF DR. S. T. ARMSTRONG, BY THE NEW YORK ACADEMY OF MEDICINE'S COUNCIL.

ONE of the most interesting episodes in the late cholera fiasco in New York has come to our knowledge, and is another evidence that that spirit of intolerance which sent thousands of unfortunate human beings to the block, the rack, and other tortures, is not dead yet, and sternly reminds the liberty-loving element in our profession to sacredly guard the liberties of every member in it.

It appears, then, late in the Summer of '92, when the cholera scare was in full blast, a young man, quite unknown, out of New York, with the consent of Dr. Loomis, president of the New York Academy of Medicine, it is supposed, called a meeting of the members of the Academy of Medicine to consider measures against cholera, etc.

Nothing however was done at the meeting, except to approve of the appointment of a committee, which had been previously selected by the Chamber of Commerce.

It appears that among other things against which this august body launched its shafts was the importation of rags. Dr. McLean Hamilton particularly condemned the practice of permitting this sort of rubbish to come into our ports; as, of all things in the world, the fever laden rag was the most diabolical. About this time, Dr. S. T. Armstrong, in a letter published in the New York *Medical Journal*, most strenuously denied that an epidemic of any kind ever was disseminated through the United States, by imported rags; and repudiated the views of Dr. Hamilton. The latter, in a rejoinder to another missive by Armstrong, drifted off from the main question and failed to meet the challenge.

But Dr. Armstrong committed the hideous offense of signing himself as the Chairman of the section on Public Health of the Academy of Medicine.

Now, the Select Committee, or its cohorts, in order to throttle free-speech and make an example of a member, who had the courage of his convictions, induced the council of the New York Academy of Medicine to order Dr. Armstrong to appear before it for trial, on the cowardly subterfuge that he had violated the code of ethics, in affixing his title, as chairman of the Public Health section, to an article which appeared only in the medical journals.

But the New York Academy of Medicine has no code, and hence the Doctor's judges were in a quandary at the start. But Dr. Armstrong may be depended on to defend himself in a manly and honorable manner. If what has come to us can be substantiated, no wonder the Academy is threatened with disintegration and ruin; for Dr. Armstrong is well and widely known, in the Marine Hospital Service, as Secretary of the section of Public-Health, in the American Medical Association and now, as visiting physito the Harlem Hospital, and, he has done nothing derogatory to the high position which he deservedly occupies in his profession.

As to this farcical charge, about appending his position in the Academy, if it were enforced, where would all our authors of any note or distinguished merit land? It is always unfortunate that occasion ever arises when it becomes necessary to discipline or humiliate a brother practitioner; but let the profession in New York, Chicago or any other great American city take warning that the necessity must be urgent and imperative to justify it, when it undertakes to institute a new inquisition among us; for though they may locally crush the feeble and independent, the whole united profession of this great country will raise its voice in defense of the weak, and wreak its vengance in such a manner and at such a time as will leave no doubt of its purpose.

SALTING STREETS TO REMOVE SNOW.

LATELY the residents of one of our fine streets became very much agitated, because the company that was operating a line of coaches thereon used salt to remove the snow that was making travel difficult. They stated many dangers and nuisances that arise from this practice. The professional men of that thoroughfare were interviewed by the daily papers, and many and varied were the statements they made. Some claimed that it was injurious to health, increasing the severity of many of the diseases in the neighborhood by the dampness, as a consequence of the melting snow. Others claimed that the slush and mud were carried into the houses, producing filthiness and increasing the danger of infection. On the other hand, some reputable physicians declared that the use of salt in removing snow from the street was not injurious to health, but absolutely beneficial, owing to the chlorine gas that was given off from the action of melting snow with salt. The presence of this gas in the atmosphere, it was stated, tended to purify the air and remove the cause of diseases. Again, the poor horses would be benefited very much, because of the greater ease with which they could drag their heavy loads through the melting snow.

These statements many of our daily papers published, and were read by great numbers of people as the truth, never thinking, or entirely ignorant of the real action of salt with snow or ice, or why it is detrimental to health.

The salt that is commonly used is sodium chloride, and the fact that we have chlorine here in combination, led to this mistake in assuming that this gas is evolved in the melting snow. Other soluble salts, such as the nitrate and carbonate of sodium, potassium, and ammonium, may be used, and no gas will be evolved or generated, and the process of melting is even more complete than in the former case. Admitting that chlorine, which has a very disagreeable and pungent odor, imparting a yellowish-green color to the atmosphere in which it is liberated, does escape from the mixture in the street, we would very soon become cognizant of its presence from this very fact. Moreover, its inhalation in such quantities as it would be formed from the surface of a wide street, is capable of setting up such bronchial and pneumonic irritation as to produce symptoms of severe bronchitis and pneumonia.

Again, the bleaching properties of chlorine would assert themselves by destroying the color of everything within its reach. Still more, if this gas were evolved in the presence of the water produced as a result of the melting process, we would have hydrochloric acid formed, and anything that came into the street, such as the iron and paint on the vehicles and horses, the clothing on the persons crossing the street, and even the pavement, would suffer from its corrosive action.

There is no chemical action whatever in this case and in order to produce chlorine from sodium chloride there must be present a sufficient quantity of manganese dioxide and heat. The action is physical and either substance remains unchanged in its chemical properties, the snow or ice becomes liquefied and changed into water, and the salt is dissolved therein.

What is the true theory of this process of melting? There is a law in physics, stating that pure water freezes at 32° Fahrenheit, but water containing solids in solution freezes at a lower temperature; and the greater the amount of solids held in solution the lower is the freezing point. Conversely pure water melts at 32° Fahrenheit, and water containing solids in solution melts at a lower temperature. Liquids freeze and melt at the same sensible temperature, which is the freezing point for that liquid. This is owing to the latent heat contained in the water, that is not perceptible to the thermometer, as only the sensible heat can be registered. Hence when a liquid freezes it loses latent heat, and when it melts it takes in the same amount that it lost when freezing and this heat is drawn from surrounding bodies. Sea water, therefore, does not freeze or melt until + 27° Fahrenheit has been reached, and a saturated solution of common salt in water does not freeze or melt until we have a temperature as low as +10°. The fact is, the more soluble solids we add to the water, the more we depress the freezing point.

Snow or ice is at a temperature of 32° Fahrenheit; add salt, thereby reducing the freezing or melting point, and we liquefy the solid snow or ice. If, however, the temperature of the surrounding air is lower than the freezing point of the melting mixture, we cannot accomplish this liquefaction. The temperature of snow never falls below 32° Fahrenheit in ordinary conditions, no matter how cold the air is, hence we do not experience the cold in our feet as we would feel if it fell as low as the surrounding temperature. Therefore reducing the temperature of the snow over which we must walk, by adding salt, we step into water colder than the air about us. Still further, during the process of liquefaction, the snow draws heat from everything about it in order that it can melt, just as the salt and ice in an ice cream freezer congeals the cream by drawing heat therefrom in order that the salt and ice mixture can melt, for it is separated from the air by the non-conductible wooden tub. Just so, in stepping into such a mixture on the street, heat is drawn from our feet and in this way acts injuriously on our health. The poor horses plodding through this slush, undoubtedly suffer intense pain from the extreme cold, and besides the snow will fasten to their hoofs so tightly that even a hammer and chisel cannot remove it. In this way they are impeded in their progress, and the cutting of the sharp ice and the expansion of the hoof by the intensely cold ice, adds greatly to their sufferings. The practice of salting streets should be prohibited and the laws on this point enforced. We have laws; but the ignorance of many and even of medical men, of the process of melting ice or snow by salt and the dangers of this practice, aside from the nuisance of dirt and slush, allows of this negligence: It may not be ignorance as much as thoughtlessness; and probably a few points bearing on this subject, suggested to the proper authorities, may remind and recall these facts in such a manner that we may at least have comfort, if not freedom from the injurious effects of salting streets.

SAMUEL P. GERHARD, M. D.
613 N. 16TH STREET.

ENCLOSED find 10 cts. for which please send me The TIMES AND REGISTER of January 6th, "Phthisis" special. I received a sample of the "Typhoid Fever" special and most heartily endorse the antiseptic treatment which it promulgates. I had about

twenty five cases in my territory last fall and naturally was led to drift to that plan of treatment, using calomel, salol and pepsin with all recoveries. I will try the sulpho-carbolate in next case. Hope the antiseptic treatment of phthisis will be as successful.

D. H. NUSBAUM, M. D.

CULLOM, ILL.

LACTIC ACID TREATMEMT OF CHOLERA.

THE "Société médicale des hôpitaux" and the "Société médicale" of Paris discussed in several sessions the Cholera, which for a number of weeks has claimed daily from twenty to thirty victims in the French Capital. Professor Netter declared in the form, that the genuine Cholera, connected with the Comma bacillus, is existing alongside of other intestinal disorders of choleraic type. The latter society, after long deliberations, recommend lactic acid as the best remedy, which has been successful in combating not only choleraic, but real cholera-diarrhœa, in the proportion of 10 gram of the acid to 20 of syrup and 2 Tct. cort. aurant., dissolved in a liter of water. Dose: three tablespoonfuls every fifteen minutes.—(Correspondenzblatt fur Schweizer Aerzte).

[In keeping with the foregoing an Armenian physician Dr. Markar G. Dadirrian (a graduate of the N. Y. Medical College) told me that in Asia Minor fermented milk is extensively used by the natives in treating cholera cases and as a preventive.—S. V. CLEVENGER.]

DESIRING some information and not knowing of so good a source as yourself, I beg leave to occupy a few of your spare moments.

1. What is your opinion of the atmospheric tractor; price of same; and is it suitable for a country doctor?

2. Where can it be obtained?

3. What is your treatment of the opium habit, and can it be applied at the patient's home?

* * *

[The tractor acts like the toy we boys knew as a "sucker." It is a thick rubber cup, with a handle. Applied to the presenting surface of a child's head, it adheres firmly enough to allow a pull of about 28 lbs. before pulling loose. This, added to the mother's efforts, is often enough to pull the head through, when but little help is needed. But the time a woman needs help is when it requires about 250 lbs. of a pull; and the tractor is then useless. Personally, I use the forceps; but an inexperienced obstetrician may do a deal of harm with them, and can do none with the tractor. The price of the tractor is $3.00.

2. The tractor can be obtained through this bureau.

3. My treatment of the opium habit it is impossible to give in detail, as it is simply the application of physiological therapeutics to each patient, and differs in each case. It cannot be successfully applied at the patient's home. The separation from home and business worries, and the exclusive devotion to the cure, are prerequisites to success.—W. F. W.]

THE CONTAGIOUSNESS OF PHTHISIS.

I HAVE long been convinced that much of the argument in favor of the contagiousness of consumption is flimsy, loose, and artificial; and Dr. Flick's article in your issue of the 6th instant confirms me further in this opinion. On page 10, he states that the theory that those who are connected with consumptive hospitals are as free from consumption as those outside, must be given up; because Dr. Williams, of the Brompton Hospital had shown in the *British Medical Journal* of September 1882, that twenty-one positive and five doubtful cases of phthisis had up to that time occurred among persons who had been connected in one sphere or another with that Hospital. In looking over Dr. Williams' paper I find that of the 345 persons who are on record as having been connected with the Brompton Hospital in thirty-six years, the length of time which it had then existed, seventeen and not twenty-six became consumptive. It is not a question of number, however, or whether those who have ever been in consumption hospitals fall victims to this disease, but whether it can be shown that they contracted the disease through infection within the hospital. This is the point at issue, and, in regard to it, Dr. Williams expresses himself in language that should not be mistaken by the most superficial observer, and which, on account of the sacred interests involved, and for the sake of accuracy and scientific integrity, no one can afford to overlook or to ignore. Dr. Williams concludes his paper as follows: "The evidence of large institutions for treatment of consumption, such as the Bromp-

ton Hospital, *directly negatives any idea* (italics mine) of consumption being a distinctly infective disease, like a zymotic fever. Phthisis is not, in the ordinary sense of the word, an infectious disease: the opportunities for contagion being most numerous, while the examples of its action are exceedingly rare." Only on the score that fiction is taken for truth, or assertion for fact, can one endure himself to believe that the above quoted conclusion implies that consumption hospitals communicate consumption to the well, and that the argument of the non-contagiousness of consumption, therefore "falls to the ground." This same Dr. Williams says (*Pulmonary Consumption*, pp. 87 and 88, published in 1887): "Infection in the wards between consumptive and non-consumptive patients is unknown. . . . My own experience is that for the last twenty years I have carefully watched for cases of infection in hospital and private practice, and though I have come across a certain number of apparent cases, they have never stood the test of close inquiry, there being always some additional element to explain the causation of disease."

THOMAS J. MAYS, M. D.

END YOUR PAPER WITH A SUMMARY.

IN the April 9th, 1892, number of the TIMES AND REGISTER, you have an article on "Acne," which is highly instructive; but the beauty of it consists in the summary. No article of any length should be written in these times without such a summary. We are overrun with literature; and no one can begin to read it all. No text book should be written unless all the articles end with a summary.

C. M. RULISON, M.D.

1. I want a work on obstetrics; not too large. What is the best?

2. What are the best dosimetric granules to order? I now have two cases, containing: aconitine, strychnine, glonoin, digitalin, copper arsenite, codeine, caffeine, calomel, atropine, apomorphine, caffeine arsenite, zinc sulpho-carbolate.

3. What is the next best book on dosimetry (I have your Manual)?

4. What do you think of papoid? Dr. Owen thinks it is a trump. Shall I play trumps first, to lead off?

I am well pleased with the TIMES AND REGISTER.

Z. W. MILLAR, M.D.

THACKERY, ILL.

[1. Lusk or Parvin will prove satisfactory.

2. For winter use, you should add to your list ammonium iodide, aristolochin, aspidospermin, cotoin, creasote, Dovers' eucalyptol, eupatorin, gelseminine, guaiacol, hydrastine, ipecac, lobelin, macrotin, myrtol, pilocarpine, potas. cyanide, sanguinarine and tartar emetic.

I employ nearly all those enumerated in the Manual.

3. Burggræve's manual is much more extensive than mine. It can be obtained of E. Fougera, 30 N. William Street, N. Y. City.

4. If Owen says papoid is a trump it must be true; for Owen is that sort of a man. I have used it mostly for men who *will* go out at night and eat lodge suppers; lobster salad especially; and for them I always recommend a tablet or two of papoid. But, mainly because I am slow to use new things when the old are good enough, I have not substituted papoid for pepsin in ordinary practice.—W. F. W.]

TIME WILL CURE HIM.

I AM 22 years old and have a hare-lip which leaves a small scar. I am raising a mustache, which I do not think will quite hide it. Could I get about half a dozen hairs inserted in the scar so they would grow? If so, could I come at night or would it require day?

SCANTY URINE.

I HAVE been troubled about five years with a urinary difficulty, passing insufficient urine, about twenty to thirty ounces daily, very concentrated, sp. gr. usually from 1020 to 1028. Upon adding an equal quantity of nitric acid, crystals of nitrate of urea will form, sometimes in a few hours nearly making the liquid solid. No sugar or albumen has ever been found. It causes a dull ache in the back; digestion fair, bowels regular. One peculiarity is that the urine is often quite pale in appearance although of high sp. gr. and scanty. It is also irritating, desiring to pass it after only an ounce or two has accumulated. My hands and feet get cold at times, but after I am in bed awhile my feet get hot, and I must put them outside the cover. My mouth is dry, but I have no excessive thirst.

Once in a while there is a deposit of urates, but not often; the urine remaining clear.

For this trouble I have taken considerable citrate of potassium, with large quantities of water. This increases the flow to from forty to fifty ounces per day, with sp. gr. of from 1012 to 1014. I feel somewhat better while taking it, but as soon as I stop its use the old condition comes back. I think I am troubled more in winter than in summer, though not much. It seems to be worse this winter than formerly. I do not lose weight, and seem to be in good health; except the back-ache. I weigh 155 pounds, am forty years old, and use no liquors of any kind. I use but very little meat, and drink mostly milk lately. I should be very glad to receive any information you might give me on the subject.

J. OETTIKER, M. D.

PLATEVILLE, WIS.

[Take atropine, gr. 1-125, ter in die, eat plenty of fruit, but little meat, no pork, veal, cheese, beans or peas. Take a glass of hot Bedford water before each meal.—ED. T. & R]

News.

THE PROPOSED MEDICAL EXAMINERS' ACT.

AN Act to establish a State Board of Medical Examiners and Licensers and to define the powers and duties of such board.

WHEREAS, The safety of the public is endangered by incompetent physicians and surgeons, and due regard for public health and the preservation of human life demands that none but competent and properly qualified physicians and surgeons shall be allowed to practice their profession.

SECTION 1. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same*, That within one month after the passage of this act the Governor shall appoint a State Board of Medical Examiners and Licensers, consisting of nine members, three to serve for one year, three for two years, and three for three years, in the first instance; and thereafter annually the Governor shall appoint, by and with the consent of the Senate, three members to serve for three years in place of those whose terms then expire. The said persons so appointed shall be graduates of some legally chartered college or university having the power to confer medical degree, citizens of the United States, and of this Commonwealth, who shall have been in the active practice of medicine or surgery for a period of not less than ten years, but no two of whom shall be residents of the same county, and none of whom shall be a member of the faculty or staff of any medical school or university. Each member of the said board shall receive a certificate of appointment from the Governor, and shall file the same within twenty days with the prothonotary of the court of common pleas of the county in which said member is registered under existing law.

SECTION 2. The said board shall be known by the name and style of the State Board of Medical Examiners and Licensers of the Commonwealth of Pennsylvania, and shall have a common seal, and may make and adopt all necessary rules and regulations and by-laws not inconsistent with the Constitution and laws of this Commonwealth, or of the United States, and shall have power to locate and maintain an office within this State for the transaction of business. Five members of the said board shall constitute a quorum for the transaction of business.

SECTION 3. Every appointment to fill a vacancy or vacancies in the said board shall be for the unexpired term, and the said vacancy or vacancies shall be filled by the Governor within sixty days after notification of the same by the board, and he shall have power to remove any member of said board for criminal, scandalous or dishonorable conduct.

SECTION 4. The said board shall organize at Harrisburg within three months from the date of its appointment, and shall elect from its own number a president and secretary who shall also act as treasurer, both of whom shall hold their offices for one year, or until their successors are chosen.

SECTION 5. The members of the said board shall each receive a salary not exceeding three hundred dollars per annum, to be paid out of the fees for examination. The secretary and treasurer shall receive an additional salary, to be fixed by the board, and shall file with the president of the board a bond in the sum of one thousand dollars, conditioned for the faithful performance of his duties. The necessary expenses of the said board shall also be paid out of the fees, and any balance remaining from the fees after the disbursements herein specified shall be paid into the treasury of the Commonwealth.

SECTION 6. The said board shall examine all applicants for license to practice medicine or surgery in this Commonwealth who are properly qualified according to the provisions of section seven of this act, and no one shall be excluded or rejected on account of adherence to any special system or school of practice. It shall hold two stated meetings in each year, one at Pittsburg and one at Philadelphia respectively, and may hold special meetings at such times and places as it may deem proper. All examinations, when practicable, shall be conducted in writing, and all examination papers, together with the reports and action of the examiners thereon, shall be preserved among the records of the said board for a period of five years, during which time they shall remain open for inspection at the office of the said board.

The applicants shall be examined in anatomy, physiology, chemistry, pathology, hygiene, toxicology, differential diagnosis, surgery, and obstetrics; and each applicant, upon receiving from the secretary of the board an order for examination, shall draw by lot a confidential number, which he or she shall place upon his or her examination paper, so that when said papers are passed upon by the examiners the latter shall not know by what applicant said papers have been prepared, and upon each day of examination all candidates shall be given the same set of questions.

SECTION 7. Any person on paying ten dollars to the secretary of said board, and on presenting satisfactory proof of being over twenty-one years of age, of good moral character, and of having received a sufficient preliminary education as defined by said board, and a diploma from some legally incorporated medical college or university having authority to confer degrees in medicine, shall be entitled to examination by the said board, and in case of failure at any examination shall have the privilege of subsequent examinations without the payment af an additional fee. Each applicant who shall have passed a satisfactory examination shall receive from the said board under seal a license to practice medicine and surgery in the Commonwealth of Pennsylvania, and the said board may at its discretion grant licenses without examination to persons holding, licenses from similarly constituted boards of examiners or boards of health in other States.

SECTION 8. The secretary shall record in a book to be kept for this purpose in the office of the said board the name, age, sex, residence, date, and place of examination, the examination number, the examination average on each branch, the general average, and date of issue of license in case such license is granted. Said book shall be open to public inspection and on or before the last day of December of each year the said board shall publish or cause to be published a list of the names and addresses of such persons as shall have received licenses from the said board within twelve months immediately thereto preceding.

SECTION 9. After the first day of July, Anno Domini one thousand eight hundred and ninety-three, no person shall enter upon the practice of medicine or surgery in the State of Pennsylvania unless he or she has complied with the provisions of this act, and shall have exhibited to the prothonotary of the court of common pleas of the county in which he or she desires to practice medicine or surgery a license duly granted to him or her by the said State Board of Examiners and Licensers, whereupon he or she shall be entitled, upon payment of one be duly registered in the office of the dollar, prothonotary of the court of common to pleas in said county, and any person violating any of the provisions of this act shall be guilty of a misdemeanor, and upon conviction thereof in the court of

quarter sessions of the county where the offense shall have been committed, shall have been committed, shall pay a fine not less than one hundred dollars nor more than five hundred dolllars for each offense, one-half of which fine shall be paid to the prosecutor.

SECTION. 10. Nothing in this act shall apply to commissioned medical officers of the United States Army or Navy, or of the United States Marine Hospital Service, nor to any member of the house or resident staff of any legally chartered medical college or university or hospital during his term of service therein, nor physicians of other States meeting duly registered physicians of this State in consultation, nor to those practising dentistry exclusively. And nothing in this act shall be construed to prohibit the practice of medicine and surgery within this Commonwealth by any practitioner who shall have been duly registered before the first day of July, Anno Domini one thousand eight hundred and ninety-three, according to the terms of the act entitled "An act to provide for the registration of all practitioners in medicine and surgery," approved the eighth day of June, Anno Domini one thousand eight hundred and eighty-one.

SECTION 11. For the purpose of this act the words "to practice medicine or surgery" shall mean to treat, operate on, or prescribe for, any physical ailment of another, for money, gift or reward. But nothingin this act shall be construed to prohibit service in cases of emergency or the domestic administration of family remedies.

SECTION 12. All acts or parts of acts of Assembly inconsistent herewith shall be and are hereby repealed.

CARE OF THE SKIN.—Cosmetics, the best of them, are of doubtful utility; and where powder is necessary, it should be always carefully washed off at night, as it clogs the pores of the skin, writes Mrs. M. P. Handy, in the January *Ladies' Home Journal*. Egyptologists tell us that the Egyptian princesses owed the smoothness of their skins to a preparation much like the glycerine and rose-water of our day. Regular exercise in the open air is another great point. English women of the upper classes think nothing of a five-mile tramp in any weather, and come in fresh as daisies after it. The diet, also, should be regulated. Pastry, cake, rich food of all sorts, tells unfavorably upon the complexion.

The Doctor's Weekly says $15,000 are spent every day in the New York saloons for the privilege of using their urinals. How many men contract the habit of drink in this way it would be difficult to estimate. Our temperance societies could take this matter up with benefit.

THE DYING DOCTOR.

"Steady! go slow, my bonnie mare—
The road is rough, and overhead
Clouds low'r, the weather is not fair,
And you and I should be in bed.
Whoap! You go too fast a gait;
We'll get there soon. The night I know,
Is wild and rainy, and 'twas late
The call came, bonnie—Whoap! go slow.

Slower! I say. The deep'ning shade
Of night hangs like a darksome pall,
And, tho' I know the way, you jade!
Go slow! I cannot see at all—
Well do your best. While I can hear
The purring sulky-wheels go 'round,
I'll trust your eyes, and never fear,
For they, I know, are good and sound.

What need I fear on such a night,
Or such a road? I've ridden miles enough
On nights like this—no stars in sight—
To almost span the earth; and rough
The weather seemed. But oh, I'm cold,
So cold to-night. I should have staid,
Perhaps—as I'm growing old—
At home—Move on, my bonnie maid!

This gait would suit me once, but now
My eyes seem growing dim; and still
The mare sees well, and is not slow
To pick the road, or climb a hill.
'Tis inky dark to-night, and tho'
I cannot see my hand before
My face, that mare, I surely know,
Will keep the road. Ah she's a goer!

Go on, my beauty! I don't hear
The patter of your hoofs, and yet
I know that we are flying—Queer
That I don't see the lights! My pet
Go on! go on! We'll soon be there,
And then, warmth, and a light will come.
Go on! go on! my bonnie mare!—
Aha! A light! We're home! We're home!"

—*Ex.*

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SULPHO-CARBOLATE IN TYPHOID FEVER.

By ERNEST B. SANGREE, A. M., M. D.

[Demonstrator of Histology in the Medico-Chirurgical College o. Philadelphia.]

TO be consistent, one's treatment of typhoid fever should be based on one's belief as to its etiology. There are few now who in the face of modern scientific research, have the temerity to deny the causal relation of the typhoid bacillus. There are many of us, also, who believe that in addition to the mischief wrought by the typhoid bacillus, the condition of the patient is made worse by the presence of various other pathogenic micro-organisms.

According to this belief the ideal medicine in typhoid would be one that would kill these microbes, or at least prevent their further multiplication; or in other words, our aim should be to obtain a perfect intestinal asepsis. It is very doubtful, however, that this aim can ever be reached.

Indeed I do not think it likely that any actual specific for typhoid, in the form of a drug, will ever be discovered. If any certain cure is to be found it will probably be in the form of vaccinating, either before or after the fever has been contracted, and thus render the body an unsuitable nidus for the development of the bacillus.

It is generally admitted that gonorrhœa is caused by the gonococcus of Neisser, yet the most active antiseptic treatment has as yet failed successfully to abort the disease; the usual explanation being that the cocci have invaded the tissues too deeply to be reached. If, however, such is the case in the easily reached, comparatively smooth urethral mucous membrane, how infinitely more difficult to reach and affect the bacilli lodged in the million and one crypts and follicles of the small intestine.

Nevertheless, although we do not have, and may never have, a drug capable of pursuing to their inmost recesses and exterminating the poisonous microbes, yet we have some medicines which can at least render the intestinal mucous membrane, and the intestinal contents, less suitable soil than they normally are for the development of these micro-organisms. Pre-eminent among these, according to my opinion, is the sulpho-carbolate of zinc. This is one of the drugs which I think it is of little use to employ in small doses. It is not a case in which a molecular effect is to be wrought on the sensitive organization of brain cell, nerve cell, or the cells of one of the various organs, instances in which minute doses, frequently repeated, often have a most happy result.

There is here a long, large, and filthy alimentary canal to be disinfected; consequently, whatever antiseptic is used, I think that all should be given, the organism will stand. With the sulpho-carbolate of zinc, I am in the habit of giving to an adult five grains every three or four hours, until the temperature falls. So far, I have invariably found that, in from twelve to thirty hours, the temperature falls from one to two degrees. Of course, I do not allude to the morning subsidence, I mean a positive reduction. The sulpho-carbolate of zinc, I believe, is not claimed *per se* to have antipyretic qualities. If such is the case, how else can the invariable lowering of the temperature be explained than on the ground that a portion of the irritation is removed? And, as we believe micro-organisms to be the source of the irritation, it must be that some of them are either killed, or that the amount of their life activity is lessened.

By lessening the amount of irritation, we lessen the amount of poisonous ptomaines thrown into the system, and thus conserve a portion of the patient's vitality that would otherwise be lost. By this means we are more likely to keep him alive until the bacilli have run their course, because they have rendered their host unfit soil for further development.

The likelihood of tiding our patient over the critical period is thus enhanced, and the probability of restoring him to health and strength greatly increased.

FOUR CASES OF COMPOUND COMMINUTED FRACTURE.

By WM. TREACY, M.D.

Helena, Mont.

CASE No. 1.—Lena Allison, aged 5 years, was accidentally shot with a Winchester rifle, 45 calibre ball. She was standing about four feet from muzzle of gun, and the ball entered just below right trochanter, fracturing femur, the ascending rami of pubis and the left femur about two inches below trochanter. The entrance wound was small, with exit about four inches long. Patient was given chloroform; entrance wound was enlarged, and nearly two inches of bone substance removed; exit wound was sufficiently large to admit of examination and removal of all detached and partially detached fragments; and loss of bone could not have been less than four inches. I did not attempt to unite bone with wire suture, because I did not think that the girl would live; but had great faith in nature, and the pure air of Montana. A bloody discharge from the rectum was found, upon examination, to be caused by a fragment of bone as large as a hickory-nut, which had been driven nearly through right wall of rectum. It was removed without difficulty with dressing forceps. Wounds were thoroughly cleansed with carbolic acid and packed with boracic acid. An extemporized fracture bed was made by stretching part of a canvas wagon cover over a frame made of 2x4's. The frame was five feet long and three feet wide. Canvas was securely tacked to frame, and openings were made in the canvas for passage of feces, also under wound in each thigh. Two large sized fountain syringes were suspended above the bed and kept constantly full of a very weak solution of warm carbolized water. Parts were kept constantly irrigated in this way for five days and nights.

No swelling having taken place in either limb, and the highest temperature being 100, the irrigation was stopped and wound thoroughly cleansed with carbolic acid and packed with dry boracic acid; as it irritates the tissues very little, if at all, has no poisonous properties, and is a moderately strong antiseptic. The only splint used was a long sand bag on each side, extending from axilla to sole of feet, with cotton padding between the limbs.

Extension was used on both limbs, that afforded great relief to pain caused by muscular spasm, and kept the limbs the same length. The rectal wound did not cause any trouble. Gentle motion of knee joints was commenced after the fourth week and continued throughout treatment. Small pieces of bone were removed from time to time. Four months after accident, the patient had good union, and was able to be in a wheel-chair most of the day. Six months from the time of accident, she could run and walk as well as ever; had good motion in both hips and knee joints, and both legs were the same length.

Case No. 2.—George Benedict, 25 years old, was shot September 27, 1887, near Demarsville. He was placed upon a cot and a bandage tied about the limb above wound to stop hemorrhage; and after a five days journey, part of the way in a lumber wagon, arrived at St. Peter's hospital, this city. He was in very bad condition, had suffered severely from the shock and the journey. Upon examination, limb was found enormously swollen and almost black, caused by obstruction to return circulation by tight bandage. There was an offensive, bloody discharge. Dr. Wm. L. Steele, of this city, kindly saw the case with me. We gave an anesthetic and examined the wound carefully. The ball entered anterior surface of thigh two inches below the trochanter, producing a compound comminuted fracture of femur and emerging posteriorly about two inches lower than the point of entrance. We decided to try and save the limb, as we did not consider that the tissues were in condition for an operation, and that if made the line of amputation would be so high up that the patient would die, while under the influence of ether. The wound was enlarged and all detached fragments of bone were removed and a large drainage tube inserted. Patient was placed on a canvas bed similar to one used in my first case, and sand bags used to keep the limb in position.

Constant irrigation was continued for nearly three weeks; as soon as it was discontinued the temperature would rise and immediately fall as soon as irrigation was commenced again. Patient was very poorly nourished and in bad condition generally. Temperature on night of arrival was 105° but declined three degrees, two hours after dressing and a full dose of opium. The patient was given syr. ferri iodidi. Had very little trouble with wound after first three weeks. The leg was dressed with gauze and long side splint. Passive motion at knee joint was continued throughout treatment. Leg united firmly four months after the accident. Had some trouble caused by small fragments of bone being necrosed from ends of shaft. He was discharged April 14, with a very good leg and is now a drug clerk in Iowa.

Case No. 3.—Last fall I was again associated with Dr. Steele in the treatment of a young man who was accidentally shot through the upper third of the left humerus.

The accident occurred seventy-five miles from Helena and the patient was brought here in a wagon. A temporary dressing had been applied by Dr. Gordon, of Great Falls, so that the patient reached Helena in good condition. The morning after his arrival here the patient was etherized and the wound enlarged. The bone was found to be very badly fractured, the nerve and artery intact. The upper and lower ends of the shaft of the humerus were made as even as possible with a pair of bone forceps, all fragments removed, the incision closed with catgut sutures and a binder's board splint applied. An opening was left for irrigation with carbolized solution and dressing applied. No wire or other sutures were used to unite the bone.

This patient recovered without a bad symptom; with good firm union and use of muscles in eight weeks.

Case No. 4.—Compound comminuted fracture of bones of foot. March 7th, about 10 P. M., this patient, a traveling man, who was in a hurry to catch a passenger train at Livingston, tried to pass between two freight cars attached to a train standing on a side track. He stepped upon a link coupling and was caught between the bumpers. The train was a long one, and the cars came together with great force. He wore a shoe with a heavy sole. After catching him, the engineer continued to back the train, and held him some minutes before he was discovered by one of the brakemen and released. The case was seen by Dr. Collins, of Livingston, and a very comfortable temporary dressing applied by him. The patient came to Helena, his home, next day. I met him at the depot, and advised him to go to the hospital, for a few days at least, thinking that an amputation would certainly have to be made. Upon examination, I found a compound comminuted fracture of metatarsal bones, with a fracture of lower end of fibula, arch of foot pressed out of shape, and an opening three inches long on dorsal surface, commencing at base of big toe, and extending backwards between second and

third metatarsal bones; foot badly swollen and very badly contused throughout; soft and pulpy below external and internal malleoli. I determined to try to save the foot, and commenced continuous irrigation with warm carbolized water, and had it kept up constantly for five days and nights.

On the third day, the tissues on the dorsal surface became gangrenous about the opening. An incision was made below the lower end of tibia and fibula, and two drainage tubes inserted connected with the opening at base of big toe. Temperature on the third day, was 103½, patient was very restless and anxious, pulse 120, very little pain. Next morning the foot was less swollen and commenced to discharge a very foul smelling bloody pus; gangrenous tissue was cut away and foot thoroughly washed out with peroxide of hydrogen; in the morning on fifth day the tissues became more healthy. Ten days later, assisted by Dr. Geo. H. Barbour, I removed the second and third metatarsal bones. They were entirely denuded of periosteum. Irrigation was discontinued and the foot dressed with boracic acid and bichloride gauze, after a thorough application of peroxide of hydrogen, each day for ten days, then dressed only once a week. The foot improved rapidly and made a complete recovery.

PRACTICAL THOUGHTS ON NITROGLYCERINE—VERATRUM VIRIDE.

By T. G. STEPHENS, M.D.
SIDNEY, IOWA.

THE origin of the present thoughts lay in my reading Dr. Harbin's article on puerperal eclampsia (treated with nitroglycerine) in the TIMES AND REGISTER, Vol. xxv. No. 22. In certain conditions the action of nitroglycerine or glonoin, is marvelous. When a powerful stimulant is indicated its universality of action distinguishes it from all others; and if given more freely than is necessary for the exertion of its influence in this way, it not only operates on the brain especially, but does so with great energy. In favor of nitroglycerine is its smallness of bulk; and as an antispasmodic and nervous stimulant it has no peer amongst medicines of that class. In a case of emergency, one drop of a one per cent. solution may be placed on the tongue, or inside the upper lip when the patient is in an unconscious condition. Its effects are immediately observed, by its property of relieving spasm; which it certainly does to a remarkable degree. Its effects are immediately manifested by the capillaries carrying more blood than they had done before its administration; the radial pulsation grows fuller, freer and more rapid; and there appears an increased warmth of the extremities. An overdose of it produces giddiness, weakened vision, headache, with throbbing in the temples, a sense of weariness, sleepiness, and severe pain in the cardiac region, with unusual trembling. Since the introduction of nitroglycerine in therapeutics, I have not had an opportunity of testing its virtues in puerperal eclampsia; although my observations of its *modus operandi* as a nervous stimulant and a remedy in some other affections especially those of a spasmodic character, have been quite satisfactory.

So far as the treatment of puerperal eclampsia is concerned, there has been no particular improvement for centuries; the lancet enjoyed the lead for more than 2000 years, and still holds an enviable position, while opium, chloral, the bromides, aconite, gelsemium, nitro-glycerine and veratrum all are entitled to credit.

My favorite remedy in puerperal eclampsia for more than thirty years has been veratrum viride, in sedative doses (Norwood's tincture), administering from a half to one teaspoonful, in a small quantity of water, every half hour or hour, until the desired effect is produced, seldom having to give more than two or three doses. Veratrum belongs to the family *liliaceæ*, and there are eight or nine species indigenous to Europe, Russia, Asia and North America. The veratrum viride of Aiton is considered to be a variety of veratrum album. The various species are to be found in the following localities.

1st. Veratrum album, Linnæus, Europe to Siberia.

2nd. Veratrum stamineum, Maxim, Japan.

3rd. Veratrum fimbriatum, Asa Gray, California.

4th. Veratrum nigrum, Linnæus, Europe to Manchooria.

5th. Veratrum mackii, Regel, Siberia to Japan.

6th. Veratrum intermedii, Chapman, Florida.

7th. Veratrum maximowiczii, Baker, Japan.

8th. Veratrum woodii, Robbins, Eastern States of North America.

9th. Is a doubtful one, Berntram and Hockernot recognizing the veratrum parviflorum of Michaux; these authors having referred it to the genus *melanthium*. All of the species have more or less acrid and poisonous properties, and all are used medicinally in regular or domestic practice. Dr. W. W. Bryant, Professor of the Principles and Practice of Medicine in the Ensworth Medical College, St. Joseph, Mo., says that veratrum justly holds an important place as a therapeutic agent. In many cases it will supersede the lancet, as no convulsions can occur or continue with a pulse below sixty; but to be of real benefit it must be given in doses sufficient to produce a sedative action on the heart at once.

THE THERAPEUTIC ACTION OF SALOPHEN.

By EDMUND KOCK, M. M.

[Inaugural Dissertation Presented to the University of Freiburg.]

SALOPHEN was employed at the Medical University of Freiburg, which is under the direction of Prof. Thomas, in a large variety of diseases. Prof. Thomas had the kindness to place under my charge the experiments with this remedy and to permit me to publish the results in an inaugural dissertation, for which I desire to express my heartiest thanks.

Availing myself of the reports of Drs. Guttmann and Froelich, I employed salophen especially in rheumatic affections, acute and chronic joint and muscular rheumatism, as well as in nervous disorders of the most varied kinds. The antipyretic powers of the remedy could not be adequately tested, as a sufficient number of febrile affections did not come under observation. Its antiseptic and disinfectant qualities, which the above mentioned authors had found to be only slightly developed, were not investigated, since more effective means for this purpose are at our disposal.

A larger number of cases than are reported in the following pages were treated; but many proved unsuitable for treatment with salophen, since more exact observation of the disease and its course led to a change of diagnosis, while some patients failed to return, or could not be kept under observation because they lived outside the city.

Examinations of the urine were made in a large number of instances, especially for the purpose of determining the amount of the remedy absorbed. The size of the doses administered is stated in every one of the observations.

(*a*) ACUTE ARTICULAR AND MUSCULAR RHEUMATISM.

Observation 1.—J. M., aged 19, domestic, had long been under treatment for marked chlorosis. July 9th, she suddenly developed violent pains in the right shoulder joint. The pains were evoked by movements or touching of the parts, and we are therefore justified to make a diagnosis of acute rheumatism of the shoulder joint. Salicylic acid was first administered, and July 11th, the patient was given four grammes salophen, and ordered to take two grammes on the same and two grammes on the following day. On her return, July 13th, the pains were less severe, and the remedy was continued in two gramme doses per day. July 17th, the pains had completely disappeared, and the joint was again moveable. Salophen was discontinued, and the treatment of her chlorosis resumed.

Observation 2.—F. K., aged 49, mason, under treatment since 1883 for emphysema and chronic bronchitis. In 1885, treated for ulcers on back. Later, suffered from acute muscular rheumatism, for which salicylate of soda was given. July 15th, after a wetting through of body, experienced severe, darting pains in the muscles of the left lumbar region. In this locality, spontaneous painfulness, as well as pain on motion or pressure, existed, that is, muscular rheumatism. Locally a mustard plaster was applied, and two grammes of salophen were administered on the same day, and a like quantity on the following day. On his

return, on the third day, the pains were much less severe, and, after another dose of salophen, disappeared completely.

Observation 3.—M. F., aged 16, shop girl ; previous health good ; during last years had suffered from marked chlorosis ; has never menstruated and suffers severe headaches. During July, 1891, contracted a rheumatic affection of the left knee joint. Three days ago (July 24, 1892), was attacked again by severe headaches and pains in same joint, which became so violent that she was compelled to seek the bed. On examination, July 27th, the joint was found somewhat swollen ; the entire region, especially at the back of the joint, was hot and red and painful. Temperature 38.2° C. Salophen three grammes ordered in doses of one-half grammes. July 28th, pains in joint much relieved, although headache persisted. Temperature 35.7° C. July 29th, swelling has entirely disappeared, as well as the redness ; pain subsiding and headache much less severe. August 1st, the pains in the knee joint have disappeared, so that patient is able to walk about the room. Salophen discontinued and the chlorosis, which is evidently cause of the headaches, treated.

Observation 4.—K. U., aged 39, servant maid, presented at Polyclinic August 18th. She had suffered for about one week from pains in the left elbow and wrist joints. At these places some swelling is still perceptible ; mobility is much interfered with on account of pains and swelling. Diagnosis: subacute articular rheumatism. Heart and other organs healthy. Salophen three grammes given, to be taken in doses of one-half gramme. August 22nd, pains greatly relieved, but swelling in left wrist joint persisted. Salophen continued. August 25th, improvement found to be considerable, on the 27th, pains have completely subsided, some swelling still persisting. Salophen discontinued, and a lotion ordered for removal of swelling.

Observation 5.—E. R., aged 17, laborer, was in hospital three weeks in 1891, for rheumatic affection of the arm, and later was treated for pharyngitis. Eight days ago he developed pains in the right elbow joint, which had only slightly improved. The joint is somewhat swollen and painful ; the temperature somewhat elevated. The lungs are healthy, but the first heart sound slightly muffled and diffuse. Salophen administered in four powders, each of 1.5 grammes, two of which were to be taken on the same and the others on the following day. When seen on the second day temperature was found normal and pains in joint less severe. After further administration of three grammes, pains had completely subsided; by afternoon of the following day the cardiac trouble rapidly disappeared.

Observation 6 —J. H., aged 47, laborer, was attacked August 15th, by acute articular rheumatism, confined to the right leg. Salophen, three grammes *pro die* administered, together with application of chloroform liniment. August 18th, pains considerably relieved, and the remedy continued in same dose. August 20th, pains no longer present and patient discharged.

Observation 7.—H. B., business man, was seized at night with violent pains in both knee joints and in the right ankle joint. The affected joints reddened, movement very painful, and effusion present in both knee joints. Temperature 38.6° C. Diagnosis : Acute articular rheumatism, probably due to exposure to cold. No albumen in urine ; heart sounds normal. Salophen administered, 4.5 grammes *pro die*. On following day pains greatly relieved ; temperature almost normal. Salophen treatment continued for five days, 4.5 grammes daily. On the sixth day pains have entirely subsided, as well as the fever; mobility almost completely restored ; the exudations nearly absorbed. Recourse now had to friction with liniment and massage.

(*b.*) CHRONIC ARTICULAR AND MUSCULAR RHEUMATISM AND ARTHRITIS DEFORMANS.

Observation 8.—T. K., aged 29, domestic, has been treated for lateral deviation and retroversion of uterus and fluor albus. Has been long under treatment at the Medical Clinic for chronic rheumatism of the feet, salicylate of soda and stimulating liniments being employed. July 13th, salophen, three grammes *pro die*, administered. During following days no improvement noted until July 24th, when patient states that pains are less severe. Salophen

continued without, however, effecting much improvement. July 28th, the remedy was discontinued.

Observation 9.—Anna B., aged 71, widow, had suffered for a long time from chronic articular rheumatism, especially of the left shoulder joint. July 21, salophen administered, three grammes *pro die*, together with baths, July 25th, no improvement noticeable; four grammes ordered daily. As the relief afforded is only slight the remedy is discontinued.

Observation 10.—M. S., aged 56, widow, since death of her husband has supported herself by washing and keeping a fruit stand. During the last few years she has been treated by Professor Wesner for chronic rheumatism in the joints and muscles of the arms and legs, as well as for fatty heart. Patient is very corpulent and extremely pale. The joints are thickened, deformed and their mobility impaired. She suffers from cardiac palpitation, dyspnœa and pains in the left side chest. The area of cardiac dullness is increased, the first sound somewhat prolonged and muffled. The pulse is intermittent, small and irregular. At present patient complains of pains in legs and arms, and especially of darting pains in the left region of neck, which have existed for eight days. In this region a swelling is found which covers an area of the breadth of two hands and is very painful. July 23rd, salophen, three grammes *pro die* prescribed, together with application of chloroform liniment to the swelling, and patient enjoined to keep herself warm. July 25th, she complains of sudden weakness, loss of appetite and a feeling of weight in stomach which she attributes to the remedy. Extreme pallor present. Salophen discontinued and urine accurately examined: the constituents of salophen were detected, but no albumen. I do not believe that the above symptoms are attributable to the drug. In the first place the dose was not sufficient to produce these disturbances, and in none of the cases treated by larger doses of salophen have I noted such effects. I would rather refer them all to the cardiac affection. The patient confessed that on July 24th, she had worked hard and then taken a long walk, and that on her return home she suffered from the above disturbances. She probably over-exerted her heart, as is shown by the great irregularity of the pulse which I was able to note during the following days. The administration of salophen was not resumed, but other measures were resorted to for relief pains and swelling of neck.

Observation 11.—A. B., aged 53, female, had suffered for ten years, from rheumatism in the arms and legs. The articulations of right arm were most markedly affected; both wrist joints, especially the right, presented the distortions and deformities observed in the high grades of arthritis deformans. The left ankle was also painful. Almost all the remedies in our possession for the treatment of rheumatism had been tried in vain. Recourse was therefore had to salophen, which was administered in doses of four grammes daily, in combination with baths and frictions. After two weeks' use of the remedy no sign of improvement was noted and it was, therefore, discontinued.

Observation 12.—J. M., aged 20, male, suffered from chronic articular rheumatism, and was treated for a week with salophen, 4.5 grammes *pro die*. As no improvement ensued at the end of this time the remedy was discontinued.

Observation 13.—F. G., aged 50, seamstress, was affected in her thirty-eighth year with acute articular rheumatism, which became chronic. She was treated in Strasburg, in the hospital at Freiburg, and in the Polyclinic with salicylate of soda, baths, faradic electricity. Marked arthritis deformans was present in the joints of the leg, and still more developed in those of the hand, incapacitating her entirely from work. Patient was very capricious and dissatisfied. She claimed that salicylate of soda disagreed with her and that electricity had had an injurious effect. It was with much reluctance that she agreed to follow the treatment prescribed for her, consisting of baths, friction with liniments, and the administration of salophen three grammes daily. On the following day she stated that she had derived no benefit from the remedy, as the pains were not diminished, and the day after she reported that the remedy affected her injuriously and refused to continue it. I

would not attach any weight to the statements of the patient.

Observation 14.—A. V., aged 21, domestic, had long attended the Polyclinic for treatment of chronic, articular and muscular pains. She complained especially of pains in the left hip and in the knee joints. After trying without success the customary remedies, salophen was tried in doses of 4.5 grammes *pro die*, in connection with applications of liniments. After weeks' treatment, no improvement manifested itself and the remedy was discontinued.

Observation 15.—J. G., aged 37, laborer, had suffered for a long time from emphysema and chronic bronchitis, as well as from chronic rheumatism in the arm joints, especially the left. Salophen was employed in a daily dose of 4.5 grammes. No improvement followed.

Observation 16.— F. W., aged 21, domestic, was treated in 1891 for articular rheumatism with salicylate of soda and embrocations. August 13, salophen four grammes *pro die* administered. August 15, slight improvement. Daily dose increased to 4.5 grammes. August 18, somewhat better. August 20, condition the same. As she was developing angena with fever, treatment was suspended and she was sent to the hospital.

Observation 17.—K. H., aged 75, widow, had been previously under treatment for anaemia and ciphalalgia for which antifebrin had been administered. Later she developed myocarditis and atheroma of the arteries, as well as emphysema and chronic bronchitis. She was also attacked by a rheumatic affection of the joints of the right arm. Salophen was prescribed, 4.5 grammes *pro die*, for a week and a half, but as no essential improvement ensued it was discontinued.

Observation 18.—M. K., aged 72, widow, was treated in 1880 for rheumatism and interostal neuralgia with salicylate of soda, wet cups, embrocations, etc. Later she was attacked by a rheumatic affection of the muscles of the back. All movements were painful. Galvanic electricity was uneffective and she derived no benefit from her sojourn in the hospital. Subsequently pains in legs developed, the joints being thickened, motion greatly impaired and very painful. August 12, salophen was administered in five gramme doses *pro die*, together with baths and embrocations. August 22d, no improvement. August 26th, slightly better. Salophen continued, but as it had little effect upon the pains it was given up.

(*c*) FEBRILE CONDITIONS.

Observation 19.—L. B., aged 59, widow, was attacked July 8th, by bronchitis attended with fever and pains. The bronchitis was treated by expectorants and inhalations, and the fever and pains by salophen, four grammes *pro die*. On the following day the temperature was reduced, but the pains were not relieved. After a second resort to salophen the fever had disappeared almost completely on the following day and the pains were considerably alleviated.

Observation 20.—St. Sch., aged 32, a married woman, had caught cold several days prior to her visit to Clinic and suffered from marked lancinating pains about the eyes and upper jaw, as well as from swelling of the entire left half of the face. She also had pains over the left supra-orbital nerve and headache. The temperature was elevated 38.3. She was given salophen, 1.5 grammes at 7 P. M., and at 9 P. M. the pains had entirely disappeared, the fever was considerably reduced and after another dose of one gramme salophen disappeared altogether.

(*d*) NERVOUS AFFECTIONS.

1. Neuralgias.

Observation 21.—E. K., aged 73, janitress, was attacked with herpes zoster in consequence of an intercostal neuralgia. She suffered from violent pains in the left of the spine and radiating forward. Salophen, three grammes *pro die*, was administered. At her next visit, two days later, pains were greatly relieved, and disappeared almost completely after a second dose of salophen.

Observation 22.—L. G., aged 26, domestic has been several times under treatment for angina and laryngitis. July 18, she again was seized with pains in the neck and right side of chest, especially in breathing. No cough present; catarrh of pharynx and larynx. Lungs and plura normal. Diagnosis of pleurodynia made and salophen, two grammes

pro die, administered. Pains were greatly alleviated and after a second dose of one gramme vanished completely.

Observation 23.—F. M., aged 24, domestic, had been previously treated for anæmia. July 8, was treated for pleurodynia with salophen, two grammes *pro die*, and two days later pains nearly gone.

Observation 24.—F. M., aged 28, cook, had been previously under treatment for anæmia. Complained for some time of pains in the feet of lancinating, boring character, extending upward from the ankles to the knee joints. The feet sometimes swollen. Internal organs normal. As rheumatism can be excluded, the pains must be regarded of neuralgic muscular character, the more so as patient states that they become marked in the evening, after being on her feet for a long time, or after much physical exertion. The neuralgia seems to be due to the anæmia, which is therefore made the chief point in treatment. Locally, embrocations, with massage of the leg muscles, are employed. Salophen is prescribed for the pains but with but little success. Afterward, slow improvement.

2. Neuritis.

Observation 25.—A. M., aged 53, laborer, treated in 1883 for rheumatism of the left arm, especially of the wrist and shoulder joints. In 1892, a severe neuritis of the left forearm appeared, attended with pains radiating along the course of the branches of the radial nerve as far as the shoulder. At the same time, there developed upon the extensor side of the left forearm a herpes corresponding to the superficial branch of the radial nerve. This disappeared under the customary treatment, the pains being treated by salicylate of soda, and, later, by antipyrine. The pains were relieved, but failed to disappear completely. They lost their violent lancinating character, but persisted in form of paræsthesia (formication, etc.). In July, salophen, four grammes *pro die*, was resorted to. The remedy alleviated the pains to a certain extent, but, even after its continued administration for some time, permanent relief could not be effected. The pains persisted in spite of salophen, combined with application of liniment and faradization. Salophen was discontinued and antifebrin, but with very slight success.

3. Cephalalgia.

Observation 26.—H. T., aged 30, widow, suffers from a vaso-motor neurosis of the fingers and constant headache. The latter was relieved by salophen, one gramme *pro die*, although not permanently. A one gramme dose of salophen always causes complete disappearance of pains for the corresponding day.

Observation 27.—M. K., aged 49, cook, has been under treatment for a number of years for constant headaches, probably connected with the menopause. Salicylate of soda, antipyrine and phenacetine afforded only temporary relief. Salophen was administered in daily doses of one gramme, and, two days later, patient reported that pains were less marked.

Observation 28.—J. H., aged 65, widow, has been treated with phenacetine for obstinate headaches on the right side. Salophen was then tried, two powders, each 1.5 grammes being given, with directions to take one powder daily in two doses. Under the use of the remedy the pains disappeared, but recurred later.

Observation 29 —K. H., domestic, has been long under treatment for chlorosis. An anæmic systolic murmur is heard at the apex of the heart. She also complains of headaches. Iron prescribed and for the pains, salophen, 1.5 grammes *pro die*. After three such doses considerable improvement.

Observation 30.—O. K., aged 35 domestic, treated two years ago for otitis media and also for adenoid vegetations in the naso-pharynx. Suffers also from anæmia, menorrhagia and headaches. For the menorrhagia, extr. hydrastis cannadensis was given; for the headaches, salophen, 1.5 grammes *pro die*. After two days administration pains considerably relieved, but not entirely absent. Salophen is continued and always has good effect on the headaches, although it does not cause their entire disappearance.

Observation 31.—R. G., aged 21, domestic, has been under treatment since 1889 for chlorosis and headaches and other disorders resulting therefrom. The headaches appear in the form of hemicrania, and have been treated with caf-

feine. Salophen was also administered but without positive results.

These observations may be supplemented by experiments made by the the writer on himself and on acquaintances suffering from headache. The writer took salophen on two occasions in single doses of seventy-five centigrammes. The effect always ensued promptly in the course of the following thirty minutes. The same was observed among his acquaintances. In one case only when he gave 1.5 grammes the pains persisted without noteworthy relief. Observation 20, may also be referred to here where the remedy rapidly and favorably influenced the headache.

4. Odontalgia.

Observation 32.—R. J., aged 19, domestic, came to Polyclinic July 18th, for treatment of pains from a carious tooth. As she refused to have it extracted, salicylate of soda was administered for relief of pains and with temporarily good effect. Some time after she returned suffering from pains in the same tooth and was given salophen 1.5 grammes, to be taken in the course of the day. She took the powder at 9 P.M., and soon after the pains abated, so that she was able to sleep. They recommenced on waking in the morning with so much violence that she consented to the extraction of the tooth.

Observation 33.—M. K., aged 21, domestic, has had several teeth extracted for caries. July 20, she presented herself with caries of the left upper molar. Salophen one gramme at night was prescribed for the pains, which were relieved by the remedy. On the following, another dose of one gramme was given, and patient did not return until August 5, when she consented to have the tooth drawn.

Observation 34.—M. G., frequently under treatment for caries, received 1.5 grammes salophen for the toothache. Pains rapidly relieved, but effect was of short duration and the tooth had to be extracted.

Observation 35.—M. T., aged 24, consulted the Polyclinic for caries. An attempt to extract the tooth was unsuccessful on account of the difficulty to grasp it and the restlessness and fear of the patient. She was told to come the following day, but to secure rest at night was given salophen 1.5 grammes which quieted the pains.

OTHER PAINFUL AFFECTIONS.

Observation 36.—L. B., domestic, suffers from chlorosis and chronic pharyngitis and laryngitis. Complains of pains on the left side of the body, extending from the gastric region backward and upward. As the pains appeared to be neuralgic, salophen was administered for some time in doses of three grammes daily, but without much effect. Later it was found that the pains were due to gastric catarrh, being especially marked after meals, and were relieved by washing out the stomach and other appropriate measures.

Observation 37.—T. H., aged 24, domestic, suffered in July from cholithiasis and was treated in the hospital. Later was treated at the Polyclinic, with the customary remedies and dietetic regulations, and as she still complained of pains, salophen, three grammes *pro die*, was prescribed with good results.

Observation 38.—T. K., female, aged 72, had an attack of apoplexy July 27, and was unconscious the entire day. There were no sequelæ, but the left foot began to swell and become painful. Patient was very emaciated and presented marked arterial sclerosis. Area of cardiac dullness somewhat enlarged, the first sound muffled and prolonged, the other sounds normal. Pulse full, regular, 108 beats to the minute. Some emphysema; marked varicis on both legs. At the dorsum of left foot a doughy, œdematous swelling, beginning at the toes and extending to the ankles, well-defined on both sides. The skin over swelling very tense and painful, and in some places raised up in blisters. Diagnosis: Commencing gangrene; rest in bed, careful diet, abstinence from alcoholic drinks ordered; gangrene, treated by elevation of upper part of body and applications of lead water. For the pains salophen one-half gramme four times daily was administered. The pains were relieved and disappeared in a few days. The swelling of foot persisted for about two weeks, then gradually receded, without development of gangrene.

Observation 39.—B. D., had sustained subluxation of the right wrist and com-

plains of pain in this region. As effusion unto the joint was still present a firm bandage was applied, and the joint kept at rest. For the pains salophen, three grammes *pro die*, was given, and after two days complete disappearance had occurred.

Observation 40.—F.F., barber, suffered from pains over margin of the ribs on right side two days after a fall. The pains were especially marked during breathing and while stooping, and when pressure was made. They were probably due to laceration or stretching of the broad muscles of the abdomen. Wet cups were applied, a liniment rubbed in, and the patient ordered to keep quiet. Salophen, 1.05 grammes *pro die*, was given for the pains. Two days later the latter were still present, but much less severe and could only be elicited by pressure, or shaking of the body as by sneezing. The following day they had completely disappeared.

If we compare the above results we find that salophen proved most efficient in acute articular rheumatism, where it rapidly and promptly removed the pains, fever and swelling within a short time. We have met with no case where it failed to act. In efficacy it is almost equal to salicylic acid, over which it has the advantages of not possessing a disagreeable taste, and of not being attended by the disturbances so frequently observed during administration of salicylic acid, which so often neutralize the good effects of the remedy. Doses of 3.5 grammes salophen *pro die* are amply sufficient in the less severe cases. I am also able to confirm the statement of Dr. Guttmann that the more recent the case the more certain will be the effect.

Although in acute articular rheumatism the results from the use of salophen were very favorable, they were inconsiderable in chronic rheumatism and arthrites deformans. Occasionally it effected some relief of the pains, but permanent improvement was never observed.

As regard the antipyretic effects of the remedy I am unable to give a decision. In the two cases reported, where a high temperature existed, it quite rapidly reduced the fever. At any rate, it may also be tried in cases of fever.

Salophen appeared extremely effective in nervous affections of the most diverse character. In these troubles it acted even in small doses, 0.75-2 grammes with great rapidity in most cases, removing, or at least, relieving the pain. In neuralgias it seems an excellent remedy and may be tried as a substitute for other nervines, such as, antipyrine, phenacetine, acetanilide. In minor nervous affections, such as headache, toothache, etc., it is also indicated. These observations I find confirmed in an article by Dr. M. Caminer* of Elberfeld, which came to my notice after conclusion of my experiments. This observer also tried salophen in various nervous troubles, such as habitual headache, trigeminal neuralgia, sciatica, hemicrania. His conclusion is that salophen is a prompt analgesic in various neuroses, and that no toxic effects were noted in any of the cases observed by him.

As above stated I have not investigated the antiseptic and disinfectant action of salophen.

If in brief I formulate my conclusions the following may be said:

In acute articular rheumatism salophen has specific effect almost as marked as that of salicylic acid.

In chronic articular rheumatism it is less effective, but may be employed as substitute for other remedies, since it relieves the pains, at least at the beginning of its administration.

In the most diverse nervous disorders it exhibits an excellent analgesic effect.

Disagreeable after-effects are never seen in doses of 3.5 grammes, which are amply sufficient.

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*Observations on the Use of Salophen. Therap. Monatsh., Oct., 1892.

The tablet-triturate form of preparing medicines bids fair to do away in a large measure with the physician's dependence on the drug store. The physician can now prescribe at the bedside or at the office in the most palatable and accurate form for almost any ailment without recourse to outside sources. This will shortly settle the voracious counter-prescribing question.—*Kansas Med. Jour.*

The Times and Register.

A Weekly Journal for Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
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ON CHOLERA, WITH REFERENCE TO THE RECENT EPIDEMIC IN HAMBURG.[1]

MAX VON PETTENKOFER holds the opinion that for an infection with cholera three conditions must be fulfilled: 1, the presence of a specific germ spread by human travels; 2, a disposition of the individual, and 3, a local disposition depending on the soil, the ground-water, the time, etc. The first two points are recognized by everybody as the essential conditions; the third point however is not recognized as a condition for an individual infection, but only of some importance in the development of an epidemic. Pettenkofer, however, believes that the local immunity, be it absolute or only temporary, means in the same time immunity of the individual living in this locality. The fact that Munich was free from cholera this year, notwithstanding the great traffic between Munich and Hamburg and Paris, induced von P. to make a rather heroic experiment on himself which should prove the validity and importance of his third condition.

He got a pure culture of the cholera bacilli from Gaffky in Hamburg, and swallowed one cubic centimeter of a fresh bouillon culture about two hours after a light breakfast, taking care to neutralize the acidity of the stomach by a dose of fifteen grains of bicarbonate of sodium. He thus introduced millions of bacilli. He lived on quite a liberal diet without avoiding fruit, cucumber, etc. With the exception of frequent thin and afterwards watery discharges within the next week there were no symptoms of disease. The stools were examined; it was proved that the cholera bacilli had found a good soil for multiplication. On the seventh day the stools were normal and the cholera bacilli were rare; on the ninth day no bacilli could be cultivated.

Several days afterwards, Prof. Emmerich swallowed 0.1 ccm. of a rich bouillon (twenty-four hours old), together with fifteen grains of bicarbonate of sodium dissolved in 100 grammes of water. He even risked several indiscretions in diet, and exposed himself to cold. Like von P., he had no other symptoms but looseness of the bowel for about a week. Comma bacilli were present from the second to the twelfth day; a pure culture of them was found in the watery stools of the third day.

Von Pettenkofer quotes the absolutely identical results which Prof. Bouchard had got when making experiments on rabbits with discharges of cholera patients (stool and urine), and with pure cultures of cholera bacilli. He found that the discharges produced invariably symptoms of cholera (vomiting and diarrhœa, cyanosis, cramps, fall of temperature, narrow pupils), whereas the culture did not have this effect. Von P. comes to the conclusion that the comma bacil-

[1] Munchener Med. Wochenschrift 46192.

lus does not create the cholera-poison, unless the bowels contain a substance, the existence of which coincides with his third (localistic) condition. The history of numerous epidemics makes von P. believe that the presence of this unknown substance depends on the soil and on the atmospheric conditions of the place where the epidemic develops. Cholera epidemics increase when the ground-water is low, and as soon as a heavy rain comes, the epidemic is at an end; this holds both for winter and for summer. The results obtained by the improvement of the sewerage in Fort William, near Calcutta, and in many other exposed places, make it evident enough that a place can be made immune by proper sanitary arrangements. Hamburg shows that every attempt of disinfection is useless if the sewerage is not perfect. The tide was allowed to carry part of the contents of the sewage canal to the place where the town gets its water-supply from the Elbe. Therefore the epidemic was quite the same as any other epidemic had been without antiseptic precautions; the great amount of money and trouble had better been used for the improvement of the canalisation.

Most of the readers know the defects of von P.'s ground-water theory and will recognize at once the fallacies in his argumentation, based on his experiment. I wish to make only a few remarks. The experiment shows, together with the results of Prof. Bouchard, that the discovery of the comma bacillus was merely a step further in the knowledge of cholera; many important questions are not answered yet by the microbiologist. In the meantime we must admit as a matter of experience that the perfect organization of the sewerage of the human dwelling places ought to be such that a place can be considered to be immune enough not to depend too much on quarantine and similar insufficient measures. This holds as well for typhoid fever.

Quarantine has to be handled so that no danger arises for those who are kept in quarantine; for quarantine we must require places made immune. If the government fails to provide for the safety of those kept in quarantine it has to be made responsible for every case of infection which takes place after the quarantine station is reached.

The personal disinfection has to be handled just as in typhoid fever; it must be done carefully in its place. The fumigation and such disinfection as is commonly used for the luggage, etc., is absolutely insufficient and ridiculous, and the trouble and expense for the government and the nuisance for the travelers is quite out of proportion to the actual use and necessity. The only party that has a benefit in the whole business is the furnishers of the "antiseptic" material.

The experiment of von Pettenkofer must not be taken as a sign of discredit to men like Koch; but it ought to increase the feeling in the practitioner that the far-bearing epidemiological questions cannot be decided in laboratories, but that the carefully observing and critical mind of the practitioner can do much to advance our knowledge by accurate records on causes of infections. We have, however, always to bear in mind the fact that only in very few cases of infectious disease can we find facts (not merely suggestions or opinions) which lead us on the right track. But if these cases are scarce, they do credit to him who finds them out.

DR. AD. MEYER.
470 W. MADISON ST., CHICAGO.

Dr. E. L. Klopp, of Oak Lane, Pa., was shot by a burglar one night last week. The circumstances appear to indicate that the burglar was an amateur. The wound is quite serious, necessitating the Doctor's removal to the Jewish Hospital. Dr. Klopp graduated at Jefferson College, in 1889.

Letters to the Editor.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by return mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,
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1725 ARCH STREET, - Philadelphia, Pa.

PRURITUS HIEMALIS.

AS a subscriber to, and a constant reader of, the TIMES AND REGISTER (which is, in my estimation, the best "all-round" medical journal published in the United States), I take the liberty of presenting a case and asking your opinion and suggestions as to its treatment, etc., through the columns of the journal. At my request the patient has written out a statement of his case; which is, to say the least, somewhat peculiar. The papules do not project above the skin. They appear to be about the size of mustard seed and are *just under* the skin. He does not suffer at all in summer when his skin is naturally active. He suffers in cold weather only; and the trouble is greatly aggravated by constipation.

The gentleman is a man of intelligence, has been a prescription druggist in the city of Memphis for a number of years, and has consulted and been treated by the best physicians in that city. I will be under many obligations and appreciate highly your advice. Long live the TIMES AND REGISTER and its talented editor.

THOS. G. BREWER, M. D.,
OSCEOLA, ARK.

The following is the patient's account of his case:

January 12, 1893.

"In the fall of 1862, while in the army, the disease first made its appearance on both legs; afterwards the thighs and arms were involved. During the summer time I have no trouble with it, but as soon as frost comes on, it makes its appearance with very dry and harsh skin, and little clumps of nodules under the skin; itching intolerably, especially when clothing has been removed at bedtime. There has never been any discharge from the itching surface but once, during the late winter and early spring of 1863. The left leg from the knee to the ankle was then covered with a thick scab, which hung on the hair like a shield, and was detached from the skin and kept moist by a watery discharge. I was entirely relieved of that by the first of May, by applications of laudanum made double strength. I never have been afflicted in that way since, but the other symptoms have returned every fall up to date.

The next treatment possible to try was in the fall of 1864; since when I have persistently used every remedy, including Fowler's and Donovan's solutions of arsenic, sulphur internally and externally, balsam Peru, picric acid, aristol, etc., etc. An ointment of aristol in oil of sweet almonds or lanoline gives relief, but does not cure. My general health is excellent, and I only suffer from constipation, from torpidity of the lower bowel. When I am constipated, the itching is much worse; the juice of one lemon generally starts my bowels, and relieves the skin trouble very much, but never entirely. During a warm spell in winter, when the perspiration sets in, the disease disappears. I am of temperate habits, don't take liquor more than once or twice in a month, and never over a tablespoonful at a time. I am not very temperate in the use of tobacco; have been a constant smoker for thirty-five years. I am now fifty-four years old, and lead a sedentary life; being forced to it by the loss of a limb. At present I am suffering very much from the skin trouble. Grease, or too frequent bathing, aggravates it.

[Pruritus Hiemalis is not easily removed. A sedentary man should avoid the use of rich food, coffee, alcohol and condiments. Fruit and vegetables should form the bulk of the diet. Such exercise as is possible should be regularly taken. Bran baths, tepid, should be taken every two days, with borax instead of soap. Sometimes woollens cause irritation, and if so, chamois skin, linen or silk should be next to the skin. Locally, ointments of thymol, menthol, carbolic acid, benzoin, aristol, europhen, or, better than any, probably, losophan in lanoline or petrolatum. Dusting with bismuth or Fehr's talcum powder sometimes relieves promptly. The constipation must be removed, and the best single remedy is aloes. I would begin with salicylate of soda (purified only) internally, gr. xx

daily, with losophan, gr. x, in lanoline, ℥j, locally, and an aloes and rhubarb pill at breakfast. Give this two weeks' trial before changing. Carbolic acid, soda sulphate, colchicum and pilocarpine internally should be tried successively if the first fail.—Ed. T. & R.]

SALICYLATE OF AMMONIA IN TYPHOID FEVER.

IN a number of your excellent Journal, Oct. 22, 1892, you did me the honor to publish an article from my pen on the treatment of typhoid fever by the use of the salicylates of ammonia, bismuth and soda. I stated that by the use of these remedies, typhoid fever could be limited to a duration of fifteen to seventeen days with all of the bad features of the disease eliminated. Since then I have treated five cases with the same happy termination. I visited three cases once every other day, averaging eight visits to each of the cases. I firmly believe that I could have treated them just as successfully with half the number of visits; with a good nurse to give the medicines and to make use of the thermometer every three hours, a physician need only to examine the daily record of temperature and to inquire about other necessary matters in order to intelligently prescribe for, without visiting his patient. I have stated it pretty strongly, but nevertheless it is as true as gospel. Under the plan of treatment as outlined in the article, you can dispense with cold baths, turpentine emulsions, abdominal cataplasmata, etc., etc.

In a few words, a physician can prescribe for his patient, dismiss all anxiety and go to bed and sleep soundly, without being disturbed by the midnight call to go and see Mr. A., who is a great deal worse, etc.

Lest I should be misunderstood, these remarks refer to cases that we see from the beginning and not to those cases that are seen for the first time after the severe symptoms have fully developed. Still this is the best treatment, but will not save all, as no treatment could. All treatment must embrace three factors, viz., germicides, toxicides and eliminants; germicides, to destroy the bacillus typhosus; toxicides to neutralize the toxines, and eliminants to carry off the deleterious products.

As to germicides, the salicylates are the best, as the experience of a number of medical men attest. I have a theory as to their action that may be a mere fancy. It seems to be well settled that the bacilli of typhoid fever produce a poisonous *alkaloidal* ptomaine, called *typhotoxin*, that enters the circulation and, "The life of all his blood is touched corruptibly." Here is the theory: the salicylate of ammonia enters the circulation by solution and absorption, it meets the alkaloidal typhotoxin, gives up its salicylic acid to the poison. The acid enters into chemical combination with the typhotoxin and forms a non-poisonous salt, the salicylate of typhotoxin, which is eliminated through the skin and kidneys. So can be explained the beneficial effects of citric acid in the form of lemonade, in changing the red tongue into a pale natural looking organ, forming the citrate of typhotoxin. I believe, however, that the salicylate of ammonia not only neutralizes the ptomaine, but that it inhibits the growth of the bacilli. The salicylate of bismuth, being insoluble in the alimentary canal, destroys all deleterious organisms as it passes along, and as it reaches the inflamed and ulcerated Peyer's patches, it acts there and exerts its germicide properties upon the bacilli *in loco*.

As to eliminants, they should embrace those remedies that act upon the skin and kidneys, and possibly the liver. The skin and kidneys are the principal emunctories through which we hope to eliminate the toxic products of the disease. The salicylate of soda and acetanilid are sufficient, and also the best. But it is best to combine germicidse, toxicides and eliminants together, as in the following prescription:

℞.—Ammoniæ salicylatis . . . ℥i
Sodæ salicylatis . . . . .
Acetanilid . . . . . aa ℥ ss

M.—Et ft. chart. xii. Sig.—Give a powder every three hours in an ounce of hot water.

This combination will produce a gentle, warm diaphoresis, and will keep the temperature in reasonable limits. In case the temperature rises to 104°, a five grain dose of acetanilid will soon bring it down. I think that large antithermic doses of the coal tar derivatives should be avoided. The salicylate of bismuth can be given

in five grain doses, three to four times daily. Under the above treatment, I have not met with a single case of diarrhœa; no tympanites; no red tongue or sordes; no delirium, low or high; in short, all the bad features of the disease were conspicuous by their absence.

D. M. Barkley, M. D.

Caseyville, Ky.

NEUROSIS NUMBER WANTED.

I AM fully convinced that you have inaugurated a plan in editing your valuable journal, that has and will continue to meet the approval of all who desire the best and latest information, on the management and treatment of special diseases, as given in your journal devoted to one subject almost entirely. I have just finished reading the last number on Tuberculosis, and found much to my interest, in fact I have enjoyed all your special numbers (as well as the others), and will have them bound for future reference. I hope you will continue to make every other number a special one, knowing that the intervening ones will be replete with good, wholesome, general information. By your permission, I would like to suggest a subject, not that I have anything much to report, but for the sake of gaining information. The study of the brain is becoming a topic of much interest, and so many new ideas have been broached recently that I would suggest progressive paresis, spinal sclerosis, or any subject which will throw light on intra-cranial lesions with occlusion, either by thrombosis or embolism, of vessels, producing symptoms of aphasia amnesia, ataxia, etc., and the treatment of such troubles. I would very much like to hear from your contributors on this subject.

I know this is a subject surrounded with much obscurity; coming under the head of neurotic troubles, embracing vague symptoms, and which the laity know less about than any other subject you have given us. Typhoid and scarlet fevers, pneumonia, any intelligent doctor can treat successfully from the knowledge he has gained at college and from experience. Whenever I see anything signed "W. F. W." I am sure to read it, as that name recalls many happy hours spent with the writer, and I feel certain of learning something to my interest.

Geo. B. Simpson, M.D.

Weston, W. Va.

[Dr. Simpson is right in his suggestion that a special number should be devoted to nervous affections, and we will at once proceed to collect materials. It would be a great aid to us if our readers were to write to us the questions they would like to have answered in this number.]

I WOULD like very much if you would publish a special number on dyspepsia; also one on diseases of the heart, both functional and organic, and their treatment.

L. C. Laycock, M. D.

Decatur, Ohio.

Society Notes.

NEW YORK ACADEMY OF MEDICINE.—SECTION ON ORTHOPÆDIC SURGERY.

[Stated Meeting, December 16, 1892.—Henry Ling Taylor, M. D. *Chairman.*]

A CASE OF CONGENITAL CLUB-FOOT SHOWING VERY LITTLE EQUINUS.

DR. ROYAL WHITMAN exhibited for Dr. Townsend a case of congenital club-foot, which was interesting, because there was so much more varus than equinus present. Apparently, the club-foot was originally not very severe, but, having been entirely untreated, there had been a moderate increase in the deformity, with atrophy of the foot. The deformity would probably yield easily under forcible correction with division of the tendons.

Dr. Halstead Myers said the case was a good illustration of the fact that when one corrects the varus, the equinus becomes more prominent; in other words, that when the foot is in the position which it occupies in this boy, with the toes flexed, and the foot adducted, the equinus does not appear so great as it really is.

Dr. A. B. Judson commented upon the remarkable development of the calf muscles, in view of the fact that he had gone so long a time untreated. He thought that if the foot could be held around mechanically, so that the callosities on the outer border would disappear the boy would probably walk with greater facility.

The Chairman said that the doubling under of the outer toes, and the falling together of the anterior part of the foot, were rather unusual features. In his opinion, mechanical treatment would be sufficient to reduce the deformity, without a resort to cutting operations.

POTT'S DISEASE SIMULATING LATERAL CURVATURE.

Dr. R. H. Sayre exhibited a young girl whom he had seen yesterday for the first time. The case, at first sight, looked like one of ordinary lateral curvature, and, indeed, not long ago, according to the mother's statement, this was the diagnosis made at one of the orthopædic institutions in this city; but closer investigation showed a kyphos at the sixth dorsal vertebra. Six months ago, she fell out of a hammock, and struck on the left side. Three months later, she began to have pain under the sixth rib, in the left mamary line, whenever the heels struck the ground forcibly, or when she was jolted in the cars, or when coughing or hiccoughing. The mother thinks this "knuckle" in the back was not so prominent at the time the diagnosis of lateral curvature was made. In most cases of Pott's disease, the diagnosis is reasonably clear, but occasionally one meets with a case like this one, in which two or three very critical examinations are necessary before a positive diagnosis can be made.

Dr. V. P. Gibney presented a boy, fourteen years of age, as an illustration of the effect of over-correction in congenital club-foot. He first came to the Hospital for Ruptured and Crippled, when quite a baby, and was treated according to the plan then in vogue, with a side splint bandaged to the outer side of the foot and leg, with the object of favoring extension of the foot. About one year later, the tendo achillis was divided in order to overcome the varus. He was not seen again until four or five years ago, when he showed a slight relapse, there being some shortening of the tendo achillis and the plantar fascia, and a disposition to walk on the outer side of the foot. Under an anæsthetic, the foot was twisted into an over-corrected, position and plaster of Paris applied and allowed to remain on for some months, when it was necessary to repeat the operation. The heel cord and the plantar fascia were operated upon at the same time. He was not seen after this operation until a week or two ago, when he returned, complaining of a feeling of fatigue on walking, and of a slight pain in the metatarsus. Examination showed the tendo achillis to be lengthened, and a moderate degree of flat-foot to be present. This case and the one recently presented by Dr. Whitman, showed the fallacy of the prevailing opinion that it is hardly possible to overcorrect a case of club-foot.

Dr. R. H. Sayre did not think the patient had a flat-foot but a decided valgus, with marked shortening of the peroneal tendons. It looked to him as if the arch had not been sufficiently lengthened and that too long a splice had been made in the tendo achillis, so that there was not sufficient contractile power left in the hamstring muscle to properly elevate the heel.

Dr. A. M. Phelps said that the tendo achillis was undoubtedly too long, but as he could not detect any motion in the gastrocnemius and solsus muscles, he was inclined to think it was a case of non-union of tendons.

The Chairman thought the case illustrated the danger of doing the operation on the heel-cord and on the plantar fascia at the same time. If the heel cord be preserved until after division of the plantar fascia, the operator has a fixed point from which to work upon the latter.

Dr. Gibney said that when the case relapsed, an attempt was made to produce over-correction, but it was found necessary to divide the cicatrices about the tendo achillis. He did not think Dr. Phelps could demonstrate that this was a case of congenital paralytic equinovarus; the position of the heel and lengthening of the heel cord were sufficient to explain the position of the foot without supposing the existence of any paralysis

Dr. E. D. Fisher, present by invitation, remarked that the general appearance of the case did not favor the theory that there was any sensory paralysis.

INFANTILE PARALYSIS.—ANASTOMOSIS OF TENDON.

Dr. Parrish, present by invitation, exhib-

ited a patient on whom he had performed this novel operation. It had occurred to him that a more useful limb might result from artificially uniting the tendon of the paralyzed muscle to that of some live neighbor, in cases of infantile paralysis, and it was only a few days ago that he had learned that was not the first case upon which the operation had been done. The operation was first performed by him on May 15, 1892, an incision being made in the space between the tendons of the extensor pollicis and the anterior tibial muscle, and these tendons then united by catgut. The foot was placed in a position of inversion, with slight extension, and a plaster of Paris dressing applied. Before the operation, there was a dropping of the arch of the foot; after the operation, the child had another acute attack of infantile paralysis which affected the posterior tibial muscle. A second operation was therefore done on November 20th, last, and the plaster dressing which was then applied, was not removed until two days ago. In this second operation, the sheath of the gastrocnemius and the tibialis posticus were cut open, the tendon scraped for a distance of about one inch, and then the two united by a catgut suture. The wound was then closed by suture, without drainage. The child is already able to walk much better than before these operations, but it is possible that another operation upon the anterior tibial will be required. The treatment now will consist in breaking up all adhesions, and exercising the muscles.

Dr. R. H. Sayre said that last spring, while looking at some of these cases of flat-foot, Dr. Parrish suggested the propriety of attaching some live muscle to the dead tendon of the tibialis posticus. The idea struck him at the time as a most excellent one, and he was glad that this first case had been distinctly benefited by this treatment. It was unfortunate that after the first operation, the child should have had another attack of infantile paralysis, and this seemed to him to be largely responsible for the imperfect result of the first operation. After the first operation, the arch of the foot was well supported but there was a marked eversion, and it was for this that the second operation was done. Two weeks ago, he had himself performed the anterior operation on a girl about fourteen years of age, and he hoped to report upon her case at some future meeting. He then referred to two cases in which a similar operation had been done upon the tendons of the fingers.

Dr. A. M. Phelps then presented a case of extreme talipes calcaneus with total loss of power of the gastrocnemius and soleus muscles, upon which he had operated in a similar manner. The operation was done on the 22nd of last September, and so far as he knew at that time, it had not been done before. The operation consists in shortening the heel cord about one inch, and in uniting the tendons of the paralyzed muscle to the tendons of muscles which had not been paralyzed—the long flexors of the toes. The foot was dressed at a right angle, and although there had been quite a noticeable gain in power, there had been not so marked a change in the cal caneo-valgus. It would have been better if he had placed the foot at the time of operation in a super-corrected position. He hoped now by the use of Judson's brace, and by improving the condition of the muscles by electricity and massage, to be able to overcome the calcaneus.

Dr. Judson remarked that the function of this brace was to take the weight of the body from the toe, and place it in the neighborhood of the tubercle of the tibia, and hence the front part of the band at the upper end of the brace, should be well padded so as to make this pressure bearable.

TENOTOMY AND TENDON-GRAFTING.

Dr. A. M. Phelps read a paper on this subject

DISCUSSION.

Dr. R. H. Sayre said that his own experience had led him to think that where there was reflex spasm produced by "point pressure," either forcible rupture or section would be required. He did not refer to the spasm existing around diseased joints, but to cases in which there were contractured tendons wholly independent of any joint inflammation.

Regarding the boy, who had been presented, he would say that his father had differed with him as to the best method of treating this boy, his father believing that tenotomy was indicated, while the speaker thought that stretching under ether would be sufficient. The parents of the boy had not agreed to the treatment proposed, and the case had accordingly passed from under their observation. He thought the boy at present showed the same condition as the other patient presented with abnormally elongated tendo achillis, as shown by his inability to stand on his toes. He fully agreed with the author as to the correctness of the general principle of immediate correction after tenotomy, and also thought that in the interesting case in which Dr. Phelps had sutured the flexor muscles of the toes to the tendo achillis, a better result would have been obtained if the foot had been immediately placed in a position of equinus. The author seemed to imply that it would be impossible to make too long a splice in a tendon; this is not so, for there is a point beyond which the muscle cannot contract. His criticisms on the "traction treatment" and its effect on the nutrition of muscle were based upon purely theoretical grounds.

Dr. W. R. Townsend said that as the author had spoken of "contracture" and "contraction," he would like to ask if any of the members could distinguish between these two conditions, for he could not and he knew several of those present who had expressed their inability to do so. He did not think the distinction made between the two conditions of any value as a guide to tenotomy.

Dr. H. W. Berg said that these terms had a well defined meaning, but Dr. Phelps had used them in just the opposite sense. The term "contracture" is applied to a temporary shortening of the muscle, while the term "contraction" is applied to a permanent shortening of the muscle. From this definition, it follows that the muscles which should be cut are those which are *contracted* while the *contractured* muscles demand stretching.

Dr. N. M. Shaffer remarked that the preceding speaker had given the definition of these terms as usually found in dictionaries.

Dr. Brackett, of Boston, being invited to take part in the discussion, said that he had been particularly interested in the subject of tenotomy in its relation to the treatment of club foot in infants. In the treatment of such cases, the surgeon should be guided by the individual case, not by any generally accepted rule. The earlier the deformity is corrected, the more will our efforts be aided by the process of natural growth in restoring it to a normal state. At present, his plan of treatment consists in first correcting the varus by means of a brace, or by plaster bandages, renewed at short intervals, then performing tenotomy, first cutting the plantar fascia; secondly, the scaphoid ligament; and, thirdly, dividing the tendo achillis. The foot is then kept in plaster of Paris from four to six weeks. As a rule, it will be found that the foot has not only been corrected, but will maintain its position, if the precaution is taken to keep on some simple retention shoe until the child is nearly ready to walk.

Dr. S. Ketch said he would like to know on what ground the author had made the statement that mechanical treatment should be abandoned, if satisfactory progress were not observed in the course of "a few weeks."

Dr. A. B. Judson thought that in the fact that our specialty was orthopædic surgery, and that our patients were growing children, was to be found sufficient justification for the continuance of mechanical treatment, not merely for "a few weeks," but for years. If a deformed foot is brought nearly to its normal shape, the growth of the child tends to restore the part to its normal condition; whereas, if allowed to remain deformed, it will grow more and more deformed.

Dr. Shaffer could not accept the views expressed by the author regarding the deleterious effect of traction on the nutrition of muscles; for his personal experience had taught him that traction, when scientifically applied, not only did not cause atrophy, but, on the contrary, resulted in an increase in the volume of the muscle. Moreover, after it has been applied, and especially in cases of infantile paralytic club-foot, it is not at all unusual to observe a pronounced increase in the temperature of the entire member, as well as an increase in motor power, even at

remote points, an increase which is so noticeable as to be appreciated by the patient, and made a subject of comment. Judging from the traction shoe which the author had exhibited, it was evident that he did not know much about the proper method of employing traction.

Dr. R. H. Sayre said that a not infrequent cause of failure of the tendons to unite, was the faulty application of dressings, by which undue pressure is made over the seat of operation, and the gap between the tendons occluded.

Dr. Phelps, in closing the discussion, said that in his use of the terms "contracted" and "contractured," he had simply quoted Barwell and Sayre. He had advised the discontinuance of purely mechanical treatment after a few weeks, because if at the end of this time he found little or no progress had been made, and the parts were rigid, he knew that by doing a tenotomy, he would do the patient no harm, and would not only save much time, but would be able to remove the braces very much sooner. He did not think it was a good plan to needlessly load down growing children with steel braces, for years at a time, as seen in one of the cases presented. He did not advocate the performance of *repeated* tenotomies, but the performance of one thorough one to perfectly overcome the deformity, dressing in the super-corrected position. Traction increases the warmth of the limb only in the same way that massage increases the circulation and temperature of the parts. Where he did employ traction, he preferred to use his hand, to any form of traction apparatus which had been devised. He confessed his inability to distinguish between a contraction and a contracture.

POLIOMYELITIS ANTERIOR ACUTA INFANTILIS; ITS ETIOLOGY AND TREATMENT.—A CLINICAL STUDY OF SEVENTY-FIVE CASES.

This was the subject of a paper read by Dr. Anna M. Galbraith. The new points raised in the etiology of this disease, were the result of three years of careful observation and study of these cases. The necessity for the energetic treatment of the acute stage was emphasized. The histories of five cases seen one month after the attack illustrated that regular treatment begun at this time, might often lead to a practical, if not to a complete cure, of the disease; whereas left to itself, the natural tendency was to go on to atrophy, deformity, etc.

DISCUSSION.

Dr. N. M. Shaffer said that he was familiar with the cases which formed the basis of this paper, and could vouch for the care with which the observations had been made. Regarding the question of whether or not traumatism could be considered an etiological factor, he would say, that his own studies would lead him to oppose this view; and although in the cases cited by the author, the relation of cause and effect seemed clear, he would decline to adopt this view until additional evidence had been accumulated. He took very much the same position in regard to the tubercular diathesis as a predisposing cause of infantile paralysis. Her observations had led him to think that a very slight attack of acute poliomyelitis anterior could occur with complete recovery, and that such cases did occur without any subsequent paralysis.

Dr. Bracket referred to a case in which there was very noticeable hyperæsthesia, followed by the usual symptoms of infantile paralysis Subsequent inquiry had elicited the fact, that frequently with the fever there is marked sensitiveness, particularly at the back. He had been unable to find any mention of this hyperæsthesia in the literature of the subject.

Dr. Fisher thought the history of tuberculosis in these cases was simply a coincidence, and the history of traumatism was hardly of much consequence, as such a history could be obtained in almost all children. In those cases in which the muscles respond to the faradic current within two or three weeks after the initial attack, he felt sure that if they had proper care, recovery would take place; but after a period of three or four months, the cells are known to be so seriously affected, that there is but little likelihood that the damage will be repaired, although by careful and persistent treatment, certain muscles will be strengthened. It has been suggested that mechanical irritation, or an electric current through a nerve, may pass up the cord and irritate the nerve centre in

the cord, and perhaps in this way affect the nutrition of the cell. This is a pretty theory, but when the muscles have absolutely failed to respond to the faradic current, and atrophy is present, together with the reaction of degeneration in the muscle, the muscle is irrevocably lost. Continued massage and electricity will improve the condition of the neighboring muscles, but not of the particular muscle which has already failed to respond to the current. He did not see many children in the early stage of infantile paralysis, but in those which had come under his observation, he had not noticed any great degree of hyperæsthesia.

Dr. Shaffer said that last spring he saw three cases in which there was at first fever, then a period of marked hyperæsthesia, and thirdly, a "limp" condition, which was the stage of true paralysis. He thought the hyperæsthesia was always present, especially in severe cases, to a greater or less degree. In the three cases referred to, the paralysis was more extensive and profound in those cases where the hyperæsthesia was the most pronounced.

Dr. Ketch said that he had noticed in both dispensary and private practice, that children having infantile paralysis, presented a particularly healthly looking appearance, and he had seen nothing to lead him to suppose that these patients were tuberculous. It is reasonable to expect that many of the cases coming to the dispensary would give a history of tuberculosis, so that many more observations were necessary before this point could be considered as settled. He had had an opportunity of seeing most of the cases described in the paper, and he could testify to the marked improvement which had occurred as the result of the treatment adopted. The prevailing idea that these cases are nearly hopeless is not founded on careful clinical observation.

Dr. H. W. Berg said that an important objection to Strumpel's theory that infantile paralysis is an infectious disease, is the fact that adults are never affected with poliomyelitis anterior; and the fact that two or three cases have occurred in the same family, or that in a certain town out of a population of fifteen hundred, quite a number of cases have occurred, does not prove anything. He did not think the method of treatment employed during the first month made any difference in the ultimate result, for the cells if severely inflamed, will be permanently damaged in spite of any treatment which might be employed.

Dr. Galbraith, in closing the discussion, said she had known hyperæsthesia to occur as early as the fourth day, and to last as long as two months. Its intensity and duration would appear to be in proportion to the extent of the parlysis, and it disappeared in the same order as the retrogression of the paralysis.

The traumatism must be sufficient to cause concussion of the spine in a spinal cord predisposed thereto. In two of the cases, fever had occurred in a few hours, followed by paralysis on the third day.

The prognosis in the acute stage should be more guarded, since death may occur with the onset of the paralysis. And further, since many children die during the second year, at which age this disease is most frequent, and under the same circumstances, in which no autopsy is made, it must be believed that this malady is more fatal than is generally supposed.

The belief in a tubercular diathesis was based,—1st. On the frequency with which pulmonary tuberculosis was found in the family history of these patients, thirty per cent. Of these, twenty-five per cent. had phthisis in both the paternal and maternal families; thirty-seven per cent. showed two or more members of the same family to have suffered from phthisis; thirty-three per cent. had phthisis with some well-marked neuroses. 2nd. The profound impression made by the disease on the general health, fifty per cent. subsequent to the attack showed in addition to the profound anæmia, marked emaciation with a tendency of the mucous membranes to become inflamed, enlarged glands, sore eyes, urticaria, and obstinate eczema. 3rd. The slight power of resistance of these patients to any intercurrent diseases, as pertussis, measles, etc.

The prognosis as to ultimate recovery or improvement in the chronic stage will depend on the extent and severity of the paralysis, the length of time which has elapsed since the onset, and the regular-

ity with which the treatment is carried out. At the onset of the paralysis only *some* of the ganglionic cells are destroyed, others are simply disabled or threatened through congestion of the cell, great pressure, and infiltration of the tissue, as well as by lack of nourishment due to the blood stasis. Hence the necessity for treatment directed to the condition of the cord, as well as the direct treatment of the muscle, stimulation of which tends to prevent its degeneration, and through the muscular contractions, acts on the ganglionic cells.

The Medical Digest.

TUBERCULOCIDIN.

KLEBS has sent out a pamphlet in which he gives the results obtained by him in the treatment of tuberculosis by his new remedy, tuberculocidin. This substance is obtained by precipitating Koch's tuberculin by platinum chloride, removing the noxious elements, and leaving the albumose in solution. This albumose contains the curative principle of tuberculin. Of it, a dose equal to $\frac{1}{5000}$ of the body weight may cause only half a degree (C.) rise of temperature in a tuberculous guinea-pig. Tuberculocidin exists in tuberculin in the proportion of 1 to 40; so that the dose of the former is $\frac{1}{40}$ that of the latter. It is regarded by Klebs as a secretion of the tubercle bacilli. In favorable cases it causes decomposition of the bacilli, which, after the injections, are found in the sputum presenting a granular appearance, as in the old cavities; irregular in size and shape, imperfectly stained and presenting evidences of decomposition. These changes disappear when the injections are discontinued after a few days' trial, and re-appear when the tuberculocidin is again employed. The temperature may rise sharply after the first injections, but a decided antipyresis follows, and the daily range soon approaches the normal. Large doses may cause so much malaise and emaciation that they must be discontinued; to be resumed if the temperature again rises. Tissue changes observed, such as exudation into tubercular tissues, are due to the natural tendency of the bodily tissues to repair, when the tubercle bacilli have become weakened.

As to the results, Klebs has studied seventy-five cases, mostly of pulmonary tuberculosis, long enough to warrant deductions from their course. Of these, fourteen cases were cured, forty-five improved, fourteen unimproved, and two died. Of his own cases, eight were cured, twenty-one improved, two unimproved and two died. Among the unimproved were a number of very advanced cases.

Local tuberculosis was not included in this list. Laryngeal phthisis was notably benefited, and necrosis of the tissues and spread of the bacilli never occur during treatment with tuberculocidin. Unless there is fever or hemorrhage, the patient can attend to business or to the ordinary occupation. If the fever persistently recur and the debility be great, Klebs advises the additional treatment by the rest-cure, benzosol, suralimentation, and a residence at Davos.

In the use of tuberculocidin he recommends the Overlach syringe, carefully cleansed *before* using, by absolute alcohol and then by carbolic solution, one per cent. After using, the carbolic solution is again applied, and then the alcohol. The initial dose is two to five milligrams. If the fever remains below 38° C., the dose may be rapidly increased to six or eight centigrams; the curative dose for man being ten to fifteen centigrams in all, or at least five cubic centimeters of the undiluted lymph. A rise in temperature is an indication for an increase in the dose.

Mayor Stuart has requested Councils to authorize the appointment of a commission to report upon the sale of the present hospital for contagious diseases, and the location of a new one, with four separate pavilions, a detention ward, crematory, disinfecting plant, etc. The commission is to be composed of two physicians skilled in sanatory matters, one member of the Board of Health and the physician of the Municipal Hospital.

Meanwhile it is as well to note the fierce opposition to the proposed re-opening of the croup ward in the Children's Hospital, as a feeble example of the feeling that would be aroused by the proposal to locate a hospital for contagious diseases in any ward of the city.

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THE PROGRESS OF SANITATION IN NEW JERSEY. *

By E. L. B. GODFREY, A.M., M.D.

CAMDEN, NEW JERSEY.

WE have assembled again, in this, the eighteenth annual meeting of the New Jersey Sanitary Association, to discuss the vital questions belonging to sanitation. The subject is one of deep importance to the Association and to the State, for it means no less than the proper care of the public health.

Sanitation is one of the important questions for Government consideration. Next to the moral welfare of a community lies its physical well-being, which constitutes, in a large measure, the basis of its prosperity. In the health of every subject the State is interested, and in the relationship existing between individuals, it has the right to guard the interests of the community. The State should look to the preservation of the lives of its people from preventable causes of disease and death. And since the welfare of one State depends in a large measure upon that of every other State, in its health as well as in its political and commercial relations, it is imperative that there should be uniform health laws, especially in relation to quarantine.

These laws should be supreme throughout the country, and should apply in all emergencies and to all causes of domestic and foreign pestilence. The yellow fever epidemic of 1886 and the late cholera epidemic in New York Harbor show the necessity of this. In addition, the State, as the ultimate source of power, and on account of its vast resources, should collect, record and analyze vital statistics; arrange the facts relating to human life under different circumstances; determine their effects, and distribute, for the welfare of its subjects, the information upon which the science of preventive medicine can be best erected. To execute the health laws of the General Government; to collect and classify vital statistics; to publish and distribute the facts essential to sanitary progress, there should be, as has been suggested by the American Medical Association, a Cabinet officer, known as Secretary of Public Health.

SANITARY PROGRESS IN EUROPE AND AMERICA.

But before passing to the record of sanitary progress in New Jersey, the subject about which I propose to speak to-night, take with me a glimpse of its course in European countries and America. Sanitary progress has been of slow growth at home and abroad. The fearful plagues of mediaeval English and Continental history seem to have been met in a spirit of fatalism, and to have literally devoured their way through Europe, until nothing remained for them to feed upon. Medical skill, in those days, was unable to

*Annual address before the New Jersey Sanitary Association, at Lakewood, N. J., December 9th and 10th, 1892.

cope with the overwhelming odds of universal ignorance and disregard of the simplest laws of sanitation. But here and there arose bright lights which dispelled the dense clouds of stupidity and superstitious fears. Like living sentinels, there stand forth the names of prominent physicians who risked, in the cause of public health, their reputation and often their lives.

In 1854, the fearful death-rate, resulting from the unsanitary condition of the English Army in the Crimean War, shocked the civilized world, and aroused England to the necessity of sweeping reforms. These reforms effected largely through the exertions of Florence Nightingale, reduced the mortality in the hospitals of the Crimea from sixty per cent. to a little above two per cent. Rarely, indeed, have the principles of sanitary science been better illustrated. It was not, however, until 1875, that England codified under one law all previous sanitary legislation and established the local Government board as a central authority in matters of public health. The recognition of the germ theory of disease marked a new epoch in sanitary methods. The sanitary laws of England are now of a high character, and, in some respects, models for us. The late cholera epidemic tested the power of the London Health officials to prevent the introduction of the pest into one of the worst hot-beds of disease in the world, the east end of London, and with successful results.

Owing to her changing political history, and to her lack of educational facilities among the lower classes, France has, perhaps, made less rapid progress in sanitation than England. Her advance during the past century is marked and the present health laws are better than in some of her neighboring countries. Councils of public health are organized throughout France and act in conjunction with the police. It is only too plain, however, that the municipal authorities of Paris and Havre were unable to deal with the recent cholera invasion as promptly and decisively as the occasion demanded.

In Germany, the health regulations are matters of interest to the Kaiser, who, by reason of his military authority, should be able to enforce existing laws. Scientific interest is shown in the etiology and prevention of disease, and the names of Koch, Virchow and others are highly revered by the educated classes of the Empire.

But all continental nations have to fight against the ancient and faulty construction of the older cities and the superstitious ignorance of the lower classes. It is difficult to teach the necessity of isolation and disinfection, and the risk of contamination from commercial traffic. The recent terrible mortality from cholera at Hamburg, the high death-rate at Paris, and the panic in Berlin were mainly due to the fact that these cities, built on sluggish rivers and permeated with canals, contain a large population, living on the edge of these colossal drains, or in barges floating on their surface, who persist in drinking and using the river water, saturated with infection.

Fortunately for America, and especially for the United States, many of the complex hindrances to thorough sanitation which exist in Europe, because of its ancient civilization and mediæval traditions, are wanting here. Our faults are those of youth and inexperience; our space is more ample; our population less dense and better educated; our material and financial resources are on so much broader and more luxuriant a scale, that, as a nation, we have, so far, much less cause for fear than our European and Asiatic neighbors.

Our sanitary history is nearly contemporaneous with our Constitution. In 1793, Dr. Benjamin Rush, the distinguished patriot and the most influential American surgeon of his day, gave an impetus to it by the methods he employed in subduing the yellow fever epidemic that prevailed in Philadelphia in that year. In 1799, the quarantine laws, established by the different States, were ordered by Government to be observed by the U. S. Marine Service. But little, however, was accomplished in the cause of sanitary progress until 1850, when the Legislature of Massachusetts ordered the report of the Sanitary Commission of that State to be printed for distribution. In 1857, a National Quarantine Convention was called to assemble in Philadelphia. This

was the first sanitary convention held in this country, and proved so popular that subsequent conventions were held in Baltimore in 1858; in New York in 1859; and in Boston in 1860. The Boston convention was the last, probably on account of the beginning of hostilities between the States.

During the war, 1860-64, decided advances were made in sanitary matters. The lesson of sanitary neglect taught England during the Crimean War, and the wonderful work of Florence Nightingale, were not lost on the United States in their hour of conflict. Camp policing and hospital management made sanitary education imperative and national. The necessities of the hour gave rise to the American Sanitary and Christian Commission and the Western Sanitary Commission of the North, and the Wayside Hospital Service of the South. The work accomplished by these organizations was of vast assistance to the Medical Departments of both armies.

In 1869, the first State board of health was appointed in Massachusetts. In 1872, the American Public Health Association was organized, and the discussions, at its annual meetings, by sanitarians from all parts of the country, gave a decided impetus to sanitary progress. In 1873, the section of State Medicine was instituted in the American Medical Association, which was itself organized in 1847. The establishment of boards of health in the different States, and of local boards in cities and towns, has gradually followed the widening growth of sanitary education. The necessity of national health laws has, of late, been clearly demonstrated, but their early enactment rests with the people rather than with the politicians. But the slow work of educating the people in sanitation will go on "without haste, without rest."

"Science moves, but slowly, slowly,
Creeping on from point to point."

Its progress rests upon the understanding of vital facts which, in time, will become as familiar as the alphabet.

SANITARY PROGRESS IN NEW JERSEY.

In the drama of sanitary progress, New Jersey has played a conspicuous part. In 1799, the first legislative act relating to sanitary science was passed. The act provided for the security of the citizens of the State against the introduction of contagious diseases, and gave the Governor plenary powers to prevent communication of citizens with vessels infected with contagious diseases, and lying in the Hudson or Delaware rivers, when the officers of the vessels were disposed to evade the quarantine laws of New York or Pennsylvania.

In 1812, an act was passed to prevent the introduction of malignant diseases into Perth Amboy, which act provided that vessels, arriving between the last of May and the first of October from parts infected with yellow fever, should be quarantined. But little had then been accomplished by the State in the way of sanitary progress. Before organized sanitary work could be undertaken, it was necessary to procure the legislative support.

In 1866, the first definite movement was made in this direction. Early in that year, Dr. Ezra M. Hunt, the present Secretary of the State Board of Health, conferred with Dr. Samuel Lilly, a member of the Court of Errors and an ex-President of the Medical Society of New Jersey, as to the feasibility of a State Sanitary Commission. They presented the matter to Governor Marcus L. Ward, who approved of it and invited several members of the Legislature to a conference. This resulted in the passage of an act of Legislature creating a sanitary commission, which was approved by Governor Ward. He appointed Dr. Ezra M. Hunt, Metuchen, President; Dr. Samuel B. Coleman, Trenton, Secretary, and Drs. Richard M. Cooper, of Camden, Thomas Ryerson, of Newark, and Isaac A. Nichols, of Newark, as members of the Commission. The Commission were requested to furnish the Governor, at as early a date as practical, with "such information and advice as they might deem important in reference to Asiatic cholera." They entered at once upon their duties with special reference to cholera, then prevailing as an epidemic. The President, Dr. Hunt, was called into service a number of times in cases of sporadic cholera. The Commission embodied in a letter to Governor Ward important advice concerning cholera, which was extensively published by the

press of the State. This attracted public attention, and educated both press and public as to the course and prevention of the disease. The Commission insisted that commercial highways, along which cholera travels, should be guarded, and asked for certain restrictions which were not given until a second letter was published. By judicious management, cholera did not become generally epidemic, but so far as the Commission were able to ascertain, there were two hundred fatal cases in the State.

In 1867, the Commission presented a report to the Legislature which included the consideration of (1) cholera, (2) the general sanitary condition of the State, (3) epidemic and contagious diseases, (4) vaccination, (5) the insane, (6) the condition of poor-houses, (7) vital statistics, and (8) work-shops and workmen. The subject of cholera received close attention in the report, and the portability of the disease, as well as the effect of disinfectants and of sanitary laws on its propagation, were ably set forth. The Commission also suggested, what is now in operation, that every city and town in the State should have its local Board of Health vested with power to determine what constitutes a nuisance and with authority to remove the same. The report also presented the need of laws relating to contagious diseases, and suggested that vaccination of school-children be made obligatory and for the indigent, gratuitous; that accurate and classified statistics of the insane and idiotic be prepared; that the feeble minded be separated from the demented; that a statist be appointed to properly collect, arrange and record vital statistics; that employers should protect employees against overcrowding, bad ventilation, etc., in factories and work-shops, and that a general health code be enacted. The duties of the Commission were not meant to be final, but introductory, and suggestive of the future enlightened action. With the disappearance of cholera, the Commission was dissolved, since the Legislature did not deem a permanent Commission necessary. But a good foundation had been laid. Public interest had been aroused. The subject of the public health and statistical record was pressed upon medical attention from time to time, by Dr. Hunt. In this work Surgeon-General Varick, and Drs. Richard M. Cooper, Lewis W. Oakley, William Elmer, Franklin Gauntt and others took an active interest and helped to pave the way to subsequent State action.

It was not, however, until 1874, that further legislative effort was made. Then Dr. Hunt and others asked the Legislature to appoint a Health Commission "to examine into the sanitary needs of the State; into any defects of existing laws bearing upon the prevention of disease, and, in general, to inquire what ought to be done by the State towards conserving the physical welfare of its citizens." This request was complied with, and a second Health Commission was appointed by the Governor, at the expense of one hundred dollars. It was composed of the following gentlemen: Dr. Ezra M. Hunt, chairman; James R. Mercien, Jersey City; Dr. Sam'l Lilly, Lambertville; Prof. George H. Cook, New Brunswick; Dr. William Elmer, Trenton, and Dr. Lewis W. Oakley, of Elizabeth. The Commission presented a report prepared by Dr. Hunt, published in the spring of 1875, and extensively distributed throughout the State, which greatly increased popular interest in sanitary matters. In this elaborate report, the Commission defined the object and effect of sanitary laws, claiming that they should not alone be mandatory but instructive and regulative, and that the enforcement of such laws is, in itself, an education. The Commission discussed contagious diseases, drainage, water supply, sewerage, garbage, and ventilation from a legislative stand-point, as to their abatable conditions. They reported, in conclusion, the need of actual facts as to our hygienic condition, and recommended (1) that vital statistics include not only the number but the causes of death; that (2) the State should look after the public health and diffuse sanitary information; that (3) there should be a central council of sanitarians, which should take charge of vital statistics and suggest, from time to time, to the Legislature new sanitary laws; and that more stringent laws should be enacted to protect citizens from nuisances and sources of disease. In June, the Commission issued a circular, containing enquiries about various sanitary matters and addressed to

both physicians and laymen throughout the State, asking for such co-operation as to enable them to judge of the sanitary needs of the State. The answers received, satisfied the Commission of the need of wider knowledge in public health matters.

On September 24th, 1875, a call was issued for a sanitary meeting at Newark, for October 13th. At this meeting, there were delegates present from Orange, Elizabeth, Belleville, Hackensack, Jersey City, Rahway, Passaic, Metuchen, Trenton, Bloomfield, and Montclair. The convention was called to order by Dr. S. B. Hunt, of Newark. A temporary organization was effected by the election of Dr. Stephen Wicks, of Orange, Chairman, and Dr. S. B. Hunt, of Newark, Secretary. The permanent officers for the session were: Dr. Samuel H. Pennington, of Newark, President; Drs. J. Henry Stone, Rahway; Franklin Gauntt, Burlington; Alfred Mills, Morristown; Henry A. Hopper, Hackensack; and A. N. Dougherty, of Newark, Vice-Presidents; George Werts, of Paterson, Secretary, and Drs. Ezra M. Hunt, J. A. Nichols and Lewis W. Oakley, members of the Executive Committee. The following papers were read: "Atmospheric Humidity in Relation to Sewerage and Drainage," by Dr. S. B. Hunt; "Removal of Milldams and Construction of Sewers at Rahway," by Dr. J. K. Shotwell; "General Principles of Drainage, Sewerage, and Water Supply," by General E. L. Vielè; "Types of Diseases at Burlington," by Dr. Franklin Gauntt; and "Water Supply of Jersey City and Adjacent Towns," by Prof. A. R. Leeds. The address of Dr. Pennington was received with much favor and printed in full, with the transactions of the convention, in the *Newark Daily Advertiser*, of October 14th. The following resolutions were adopted:

"That the members of this Association at once proceed to the formation of sanitary associations in their respective localities."

"That the subject of State water supply be commended to the consideration of these local societies."

"That a committee of five be appointed to report next year on the subject of water supply."

Prof. Leeds, Gen. Vielè, Albert Beach, and Drs. Pinkham and Bodine were appointed on the committee. The permanent officers elected for the ensuing year were: Prof. George H. Cook, New Brunswick, President; Dr. J. A. Nichols, Newark, First Vice-President; Dr. John A. Stearns, Trenton, Second Vice-President; Mr. George Wertz, Passaic, Recording Secretary; Dr. Ezra M. Hunt, Metuchen, Corresponding Secretary, and Dr. Samuel H. Pennington, Newark, Treasurer. The Executive Council consisted of Drs. S. B. Hunt, W. P. Lyman, L. S. Dennis, Senator Potts, Frederick Bourquin, and Dr. Franklin Gauntt. The Convention adjourned to meet at New Brunswick in the following year. From the first, it met with the favor of the sanitarians, and to-day, as the New Jersey Sanitary Association, it is one of the influential forces of the State.

No legislative action was asked for at either of these meetings, or obtained by the convention. But the Corresponding Secretary, Dr. E. M. Hunt, untiring in his efforts to further the cause of sanitation, visited Europe in 1876, in company with Surgeon-Major John S. Billings, U. S. A., for the purpose of inspecting hospitals and of studying sanitary questions. Returning in January, 1877, profoundly impressed with the sanitary needs of our State, he conferred with Senator George C. Ludlow, who introduced and supported a bill to "establish a State Board of Health," which was approved March 31st, 1878. The bill met with favor in the Senate, but encountered such opposition in the House as to require a presentation of all of the facts in evidence to secure its passage. The original bill did not include vital statistics, because this subject was not well understood. To secure this, a conference was held the next year between Dr. E. M. Hunt, Dr. E. J. Marsh, Hon. George C. Ludlow, Hon. William Magee, Hon. G. A. Hobart, and Hon. F. A. Potts, which resulted in a special bill as to vital statistics, and in the securing of its passage. Governor Beedle approved of the bill and expressed anxiety to appoint those who would give the measure success. The following persons were appointed members of the Board: Ezra M. Hunt, M. D., E. J. Marsh, M. D., Ezra A. Osburn, C. E., Laban Dennis, M. D.,

Prof. Cyrus Brackett, James M. Ridge, M. D., Theodore R. Varick, M. D., Hon. H. C. Kelsey and Hon. John P. Stockton, ex-officio. In May, 1877, the organization of the board was effected and the plan of a Department of Health and Vital Statistics was thus outlined and authorized.

The Board, from the first, took a wide and comprehensive view of its sphere and privileges. A critical examination of its reports and circulars shows that a definite plan was pursued, which was the diffusion of sanitary information, first among the members of the medical profession, and second among the people. Next to physicians, the Board enlisted the interest of civil engineers, teachers, architects, chemists, plumbers and members of other allied callings. Even the agricultural population was reached through information given concerning the care of animals in contagious diseases. By its reports and circulars; by the use of the press; by conferences with boards of trade, local boards of health, common councils and mayors of cities, and by talks on sanitary subjects, the Board educated a sentiment throughout the State so favorable to sanitary progress, that the laws relating to public health have been revolutionized. In the accomplishment of this, the New Jersey Sanitary Association, the transactions of which the Board of Health have published from year to year, materially assisted.

Having considered the history of the organization of the State Board of Health and that of the New Jersey Sanitary Association, let us enquire more specifically what each has accomplished in the matter of sanitary progress. The State Board of Health has had a distinctive plan from the first. This plan, as stated, has been educative in all of the branches and bearings of sanitary science. Besides the education of the people, the Board secured a series of laws which gave to itself necessary powers ; provided for the organization of local boards of health ; determined definitely their sphere of action and provided for the return and the recording of vital statistics from the cities and townships of the State. Its code of sanitary laws is not excelled by that of any other State. The record of the progress of the Board may be found in its sixteen annual reports ; in its eighty circulars ; in its Inspector's Guide ; in the score of laws passed, and in its consolidation of various acts, in the health laws of 1886, 1887 and 1888. Its course has been steadily progressive, as the original laws with their additions, alterations and enlargements plainly show. Its progress has been difficult, because all legal precedents of the State were in favor of common law, and the slow methods of indictment by jury system. Sanitary law and administration can only be successful with police and summary methods. This principle, the Board strenuously urged. In 1879, the Secretary, Dr. E. M. Hunt, read an address before a Legislative Commission, consisting of Hon. Barker Gummere and Hon. William Magee, and obtained the admission that this principle was necessary and right, although the decision of the courts and precedents were against it. They advised the Board, through the Secretary, to persevere and establish a precedent. To do this, it was necessary to overthrow the old custom of boards of health being committees of Common Council, or deriving their powers from indictment by grand juries, and to gain for local boards of health, power to define nuisances and to provide for their abatement without judicial proceedings. In the case of the City of Camden *vs.* Hutton, the Court of Errors declared that the health boards had no power to decide as to nuisances. The changes in the laws since then, by which the board of health has gained this power, present a striking contrast. The reports and special circulars of the State Board of Health educated popular sentiment in its behalf and contributed much to these changes in the law. No sanitary subject seems to have escaped practical consideration in these reports. With the public enlightened, the importance of sanitary science becomes quickly appreciated. Provision has been made for a health board in every city, town and township, supported by legislative acts, which give each board full power to pass, alter, amend and enforce ordinances on fifteen sanitary subjects, besides general power over all nuisances. The work of the State Board is largely edu-

cational and advisory; that of the local boards, administrative. This completed the entire system of sanitary jurisprudence for the State, except in Hudson county, where the general law has many of its functions exercised by a county board.

Having briefly considered the work accomplished by the State Board of Health, let us now enquire what further should be done to increase our sanitary interests. But little, it may be said, except to preserve the law in its entirety and to protect it from disturbing legislation. This requires watchfulness on the part of the State Board, and of this Association, in order to prevent the enactment of crude laws which would disturb the general system. Defects, however, are few in the State law. Judge Laning says, "We do not so much need additional legislation by the State as additional and intelligent legislation by local boards of health. For this the State law amply provides in powers delegated to them for the passage and enforcement of ordinances." Two suggestions were made by Judge Laning in the last report of the State Board of Health. They are in substance as follows: First, for the larger cities, greater discretionary power should be given to the boards of health as to the amount of money that may be expended to execute properly the fifteen powers delegated to such boards. Second, "That the State Board of Health should have the right to apply to the Court of Chancery for an injunction to restrain a nuisance, or a business hazardous to the public health, in all cases in which the proper health board fails to act and in all cases where the nuisance or business affects the health of the citizen within the limits of two or more sanitary districts."

Counselor William I. Lewis, of Paterson, in speaking of the health law of 1887, says in the last annual report of the Board: "That while local boards were enabled to abate a nuisance existing on property, and to recover from the owner the expense incurred, yet that where the owner was a non-resident, in which case recalcitrancy is most often found, the fact that the recovery of the amount must, according to the form of the statute, be by action of debt, precludes recovery by the Board, but that an amendment to the act, allowing a recovery by attachment, would give ample remedy in such case."

But there are other needs of importance, especially to local boards. Freedom from political control, and an increase of sanitary knowledge by the members, are both needed to accomplish the best results. And, too, it must be said that the relationship that the medical profession bears to health boards is not fully appreciated. With the State Board of Health as a model, a corresponding amount of intelligent activity and business methods on the part of local boards would materially build up the sanitary defences of the State, and widely diffuse the knowledge to maintain them.

And now a word in regard to the New Jersey Sanitary Association. Since its organization, the Association, by its annual meetings, by the publication of its transactions, and by the commingling of sanitarians from all sections of the State, has aided largely in the progress of sanitary science. Its members have aimed to contribute papers in which sanitary matters have been dealt with in a specific way, and which have, therefore, possessed a positive value. May the Association continue in this high aim; may it encourage scientific study, and enlighten public sentiment; may it promote the interests of sanitation by mutual acquaintance and interchange of ideas; may it never cease to disseminate knowledge and to watch over the interests of the State.

When the population of New Jersey thoroughly understand and practice the simple rules of public health; when our architects, builders and plumbers are encouraged to make use of the best sanitary appliances in our homes and in public edifices; when the medical and legal profession exert all their influence in favor of sanitary jurisprudence; when our local authorities and State Government appreciate the importance of public health to the tax-payer and the wage-earner; when, in short, we have done all in our power to advance the cause of health, *then*, and not till then, will our work be done.

It rests with you, gentlemen, as members of the Association, to hasten, by your united efforts, the coming of that day, and may it soon dawn on this fair State of New Jersey.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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DEPOPULATION OF FRANCE.

LARGE families are said to be common in France, but the children die early; the heavy mortality in early life being due to inherent feebleness of constitution. This is variously attributed to alcoholic and other excesses, hard work, insufficient food, and the privations experienced in a land where unremitting toil is necessary to win the barest livelihood. In spite of repeated conquests, and the settlement in France of Romans, Franks, Goths, Burgundians, Normans and the flotsam and jetsam of countless waves of invasion, the Troglodyte type as represented by the Cro-Magnon and Neanderthal skeletons has survived. The French race is old, very old; and requires more than any other to be cast into the crucible and to be remoulded. It has clung with matchless pertinacity to its original home, while other races have renewed their youth by migration and intermixture. While other peoples have sent out their surplus youth into the world in search of new homes, the French have allowed all the invasion waves to pass over their heads; and, as each has subsided, the population of the Seine, Loire, and Rhone valleys, has been found to have been simply submerged, and neither displaced nor exterminated. The process of dividing and subdividing the field of labor and the property of a man among his children cannot go on indefinitely, without reducing the means of subsistence below the minimum. Perhaps what supports one man may support his two sons, though not so well; but when it comes to his four grandsons, eight great-grandsons, and sixteen great-great-grandsons, it is obvious that the limit will soon be reached. Consequently, the natural growth of a population must be sustained by a like expansion of its food-producing area, or by an increase in the food-production of the territory occupied. The latter has also its limits; so that a nation with a healthy natural growth must take up new territory; or that state of general pauperization will ensue that we now see in France; where the holdings of land have by subdivision become so small that they are barely enough to support the owner. Children are unwelcome, for there is no additional morsel to fill the additional mouth. The result is inevitably a nation of dwarfs, where life is a petty, penurious struggle for the barest existence; a life that has nothing in it to develop greatness of mind or strength of body.

The law of primogeniture has its disadvantages, when no limit is put to the amount of the inheritance that can be entailed; but, as a factor in stirpiculture, it is undoubtedly beneficial. The eldest son steps into his father's place, and the cadets go out into the world to win their own inheritance. This is a healthy condition of affairs. It keeps up the vigor

of the race. The traditions of former conquests, and the spur of necessity, nerve the youth to the efforts that win success in adventurous undertakings.

Were such conditions to be forced upon the Frenchman, the alleged effeteness of his race would quickly disappear. The French Canadian is not behind his Anglo-Saxon neighbors in physical and mental development, and is the most prolific race in North America. France has been unfortunate in that she has not retained this colony, in which her surplus children could have found a home, and thus prevented the engorgement of population in France itself. The influence of emigration in keeping up the vitality of the parent, non-immigrating, stock is shown in the case of Germany, from which countless swarms have issued, and yet to-day the German race shows no signs of decay. But the absence of a like expansion stifles the vigor of any people. France's greatest blessing would be the establishment of a foreign tyranny so oppressive as to drive the French abroad, and supply a new strain to the home stock.

Letters to the Editor.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,
TIMES AND REGISTER,
1725 ARCH STREET, - Philadelphia, Pa.

NUX VOMICA IN LARGE DOSES.

I NOTICE that you speak of large doses of nux vomica. I am with you in that respect, but have reached my limit.

I have a very poor capillary circulation, purple lips, blue nails, etc. Also, I am very sensitive to cold, which symptom I ascribe to my poor capillary circulation. I am now taking tincture of nux vomica (from P. D. & Co's fl. ext.), in doses of 3j, ♏xl, by the graduate. I have been taking such doses about two months, and smaller doses two months more. I began with gtt. xxx, and gradually increased; at 75 ♏ the effects of the drug began to appear; and, as I continued the same dose, the effects passed away in a few days. I have kept increasing the dose to keep up occasional slight rigidity of the muscles of the jaw, and now a dose of 3j, ♏ xl, does not affect me.

Can I safely increase the dose, and for how much longer is it safe to use it? This is new ground for me.

As you said you were afraid to tell the size, perhaps you will think it safe to give me your ideas here in this connection. DR. W. H. TASSELL.

[I would prefer to employ in this case a combination of strychnine, with strophanthus, cactus, and spartein; with one week each month of digitalis.—ED. T. & R.]

SCANTY URINE.

ABOUT two weeks ago I wrote you concerning myself; you recommended atropine $\frac{1}{125}$ gr. t. i. d. and hot water before meals. I have used the treatment as directed, but was obliged to discontinue the atropine, or only use it once a day, on account of its effect on my vision.

I think that I feel somewhat better, with regard to the dull pain in my back and part of the time, at least, I have passed more water.

One of my principal troubles is, however, that I pass so much more water at night than during the day; being obliged to get up about twice each night, and passing from ten to sixteen ounces during that time. It usually has a specific gravity of 1012 to 1016. Then during the forenoon I pass but little, and that very concentrated.

I sent a specimen to Chicago for analysis, and outside of a trace of uric acid and urates, they claimed that it was normal. I do not like the passing of water at night in excess of the day. You also recommended fruit. We are unable to get much fruit here, excepting apples and oranges; and apples always seem to cause so much flatulence. If you can give me any

further suggestions I should be glad to hear from you.

My appetite is greatly increased since following your treatment; in fact it is rather too good.

JAMES OETTIKER, M. D.
PLATTEVILLE, WIS.

[Use cooked fruit, or fruit juices only. Take a dose of pilocarpine at bedtime, and the atropine in smaller doses during the day.—ED. T. & R.]

Book Notices.

FERMENTATION, INFECTION AND IMMUNITY. By Dr. J. W. McLaughlin, Austin, Texas, 1892.

The above is the title of a very instructive volume containing advanced ideas on the subjects under consideration. As the author in his preface says, "Many theories have been advanced regarding these processes, yet they are all more or less defective," and it is with the intention of substituting for these, a new theory, which he believes will cover the ground and explain the phenomena satisfactorily by means of the well defined laws of physics, that this book has been written. The first chapters consider the subjects of fermentation, putrefaction and infection, in their mutual relations, and the various theories which have been advocated from the time of Schwann, until the present. The third chapter includes the statement of the author's theory, in these words—"The laws of matter, and motion, furnish energy to ferments, living and non-living alike; that in fact vital force, as far as it relates to physical action, is nothing more than transformed physical force and is subject to the laws of correlation, and conservation that govern force in its physical manifestations;" in other words, "Energy or dynamic force, the cause of all physical phenomena, is derived from atomic, molecular or molar motion."

The causes and phenomena of infection are explained by the theory, that they are dependent on vibratory motion in the atomic constituents, and propagated by wave-like motions similar to the "etherial wave motions," which produce the sensations which we define as light, sound, etc. As a deduction from these considerations, follows the discussion on the self limitation of acute infectious diseases, which depends in large measure on the inhibitory effects of bacillary products, on the further growth of the bacilli; and this, in time, brings up the subjects of natural and acquired immunity, which are fully and interestingly discussed, and include immunity produced by virulent bacteria, by attenuated bacteria, by blood serum of immune animals, the exhaustion theory of Pasteur, the humoral and retention theories, the phagocytic theory; and lastly, the "phasical" theory of the author brings the book to a conclusion. The volume is well written, and shows deep thought, while the matter is put into attractive form, and cannot fail to be very interesting to those who wish to get at the ultimate causes of the subjects of which it treats. E. W. B.

The Medical Digest.

For coryza, Minney recommends atropine solution, gr. ij to aqua dest. ℥j, a few drops sprayed in the nostril several times a day.—Kansas *Med. Jour.*

As remedies for the vomiting of pregnancy, Thomas More Madden (*Medical Times and Hosp. Gaz.*) enumerates:

1. Remaining in bed till the usual sick time has passed.
2. Pepsin and light diet.
3. Oxalate of cerium, gr. ij.
4. Salol, gr. ij.
5. Phenol, gr. j.
6. Cocaine, gr. ss.
7. Morphine hypodermic.
8. Hydrocyanic acid.
9. Chloral with columbo in plain soda.
10. Glycerine tampon for prolapse.
11. Venesection in plethoric cases.
12. Saline laxatives.
13. Premature labor.

---

1. GUAIACOLPIPERAZINE—SCHERING: —This product is a yellow powder, consisting of 50 per cent. guaiacol in combination with piperazine and 20 per cent. of sodium cinnamate. By the addition of piperazine and cinnamate of sodium, guaiacol, which is quite insoluble, is rendered readily soluble in water and consequently it can be used for subcutaneous injections. Our friends suggest its use in the treatment of lupus and for cancer-

ous ulcerations, relative to their local confinement. They infer this from the fact that experiments on animals, which have previously been infected, have shown that injections of creasote have prevented the further development of the tuberculous poison, so that tuberculosis could attain but slight development.

2. AETHYLENDIAMIN, ABSOLUTELY PURE—SCHERING:—Though aethylendiamin is already a well-known body, *the therapeutical use* of this chemically pure preparation, now suggested by *Schering*, *is new.*

Aethylendiamin : . . $\left.\begin{matrix}CH_2—NH_2\\CH_2—NH_2\end{matrix}\right\}$

is a colorless liquid, which has strong basic properties and is absolutely *non-caustic* in the purity as produced by Schering. In experimenting at the Schering Laboratories, to test the action of this preparation, it was found their above product *dissolves albumen very easily even when boiled.*

From this observation Schering inferred that aethylendiamin would probably be suitable for dissolving membranes, such as are produced in *diphtheria* and similar diseases upon the mucous membranes.

As is known from literature, the bacilli which are the cause of this murderous disease are located between the natural mucous membranes and the albuminous membranes, which are separated by the bacilli, so that the bacilli are not accessible to ordinary disinfectants, such as carbolic acid, cresols, menthol, methylenblue, etc., for the reason that all these substances, instead of dissolving the albuminous membranes, coagulate the same, whereby in some measure a protecting surface for the bacilli is formed and thus the latter rendered practically inaccessible with antiseptics. Should, therefore, aethylendiamin prove its solvent action on the pseudo-membranes, as it does on albumen, we would have a remedy to reach the generators of the disease—the bacilli—and to destroy the same by means of disinfectants.

The properties of aethylendiamin permit the brushing of these membranes, as far as they are accessible, because the taste of the preparation is not only *non-corrosive but extremely mild.* Aethylendiamin is no escharotic whatever.

Since *Schering* found that aethylendiamin can be easily mixed with cresol,—the disinfectant now so much in vogue—he has prepared a solution containing *2 per cent. cresol and 2 per cent. aethylendiamin*, which is apparently well adapted for the treatment of the disease named, either by applying with brush or inhalation..

With this *cresol-aethylendiam-insolution*, *albumen* is likewise *not* coagulated which, as is known, is invariably the case with all other cresol-solutions.

The question now arises, will this cresol-aethylendiamin-solution penetrate the false membranes and then destroy the bacilli which accumulate under the same? This idea of Schering's we believe worthy of a trial.

MIGRAINE.—In my case the advent of a migraine is generally recognized on awaking by a desire to lie still and avoid all mental and bodily exertion; the head is hot, feels heavy and dull, if not already aching; the eyes lack lustre; the tongue is slightly coated ; there is anorexia and some thirst; the urine is frequently pale and of light specific gravity. During the day the necessary work is done with much effort, fatigue and irritability of temper ; the headache increases, and about 4 or 6 P. M., compels me to lie down and cease from all further effort; later on the headache becomes more intense and throbbing, and culminates in a copious acid vomit, after which relief and sleep come, and in the morning I arise free from headache, but with a tired, strained feeling, and some muscular soreness. The temperature during the attack is subnormal, but rises after the vomiting, with free skin action and discharge of orange-colored lithates in the urine; the contents of the stomach seem to be retained for hours, and got rid of only by vomit.

The lessons learnt from many attacks have taught me that a severe bout of migraine is relieved most certainly and completely by the concussion of vomiting, the stomach being thus emptied of its contents, circulation and absorption being restored. I have cut short (when absolutely necessary) the attack by an early hypodermic injection of apomorphia, but the remedy, with the attendant depression and vomiting, is as bad as the disease.

The severity of the headache is, in my experience, directly proportionate to the

acidity of the gastric contents, and it can be greatly lessened by the free imbibition of alkaline draughts—sal volatile, soda, ginger and peppermint with spirit of chloroform in a tumbler of cold water, being with me a favorite and very effective drink. Two or three tumblers of this will almost certainly relieve the headache. Solid food is undesirable, and rarely taken. Abstinence, except from drink, is the rule during the day. When vomiting is over, the exhibition of an alkaline drink, such as I have mentioned, is very agreeable to neutralize the stomach acidity, and then a few grains of blue pill, compound colocynth and extract of hyoscyamus, will induce sleep and act like a charm.

The exhibition of alkaline drinks may be pushed further, and if used earlier in the day, may relieve entirely the headache and prevent vomiting. I see in my out-patient room many cases of migraine, some severe ones, and I have often found that copious draughts of water during the day or night, a tumblerful at a time taken frequently, up to two or three quarts in amount, prove very useful in mitigating the headache and aborting the attack. The *rationale* of its action seems to be that it dilutes, neutralizes, and washes onwards, the acid contents of the stomach, promoting intestinal action.

As prevention is better than cure, I am now able, after years of suffering, to detect the early symptoms of a coming attack, and to commence treatment twelve or twenty-four hours in advance, so as to abort the migraine altogether. I have been able also to trace in myself the numerous faults, either of habit or environment, which produce migrainous headache, and so, recognizing the exciting causes, have been able so to adapt my mode of life as now to escape almost altogether the dreaded evil.

First, then, in my case, and in many others which I have treated, I lay down the proposition that *a migraine is due to defective or insufficient excretion, partly of the liver, but mainly of the kidney.* Migrainous patients will present a muddy, sallow complexion, a dull eye, yellowish conjunctivæ and a yellowish tint of skin. On inquiry, you learn that the bowels are costive, not acting daily; that, though the urine, after an attack, is high in color and loaded with lithates, yet before and during the attack it is pale and limpid, and, if you examine it, of low specific gravity. You will find that just before the attack, your patients are inert and lazy, probably complain of backache, and are indisposed to mental and bodily exertion; they will tell you that after the attack they are more cheerful and bright, can enjoy their food and social intercourse, and feel brisk for work, whereas, just before the attack, they are unduly irritable, short tempered, and nothing goes right with them. You will probably also, on close inquiry, get at a history of flatulence and eructation suggestive of liver congestion. All these little matters are to me now well recognized symptoms of the coming storm, yet for a long time they passed unnoticed.—*Lancet.*

THERAPEUTIC NOTES.

Translated by E. W. BING, M. D.
Chester, Pa.

Researches on Heat and Fevers.—Max Hertz, who has made interesting experiments on this subject, rejects the opinion which considers fever as a salutary reaction of the organism. Fever is the result of bio-chemical processes which have their seat in the cell elements. The author has studied this process of elementary organisms in brewer's yeast, for which he has fixed the superior and inferior limits of resistance to heat. Under the action of weak amounts of menthol the fermentative action of yeast is not modified, and yet menthol is a strong antiferment. An extended solution of this substance acts on the protoplasm of mammalia as an antipyretic. Fever is not simply a collection of symptoms but a condition in which the cells of the organism are modified.

Hertz recommends hydrotherapy in fever, which he considers to act in these ways: By abstraction of heat, by excitation of the skin and by moistening the epidermic layers. He uses the following method: The patient is wrapped in a wet sheet and remains in it for fifteen to twenty minutes. The water is rapidly evaporated and should be replaced by means of a sponge dipped in cold water. On removal of the sheet the patient should remain uncovered for some min-

utes. This insures lowering of the temperature.—*La Med. Moderne.*

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INFLUENCE OF SCARLATINA AND ERYSIPELAS ON THE PROGRESS OF PREGNANCY.—M. le Gendre had charge of several cases of these diseases in pregnant women. From his observations, it resulted that in the great majority of cases there was no tendency to abortion. If labor or abortion was produced, no genital infection occurred, provided that antisepsis was thoroughly carried out. The children bore no traces of the diseases. The only patient that he lost was a woman attacked by malignant diphtheria, who, a short time before death, aborted. The foetus was dead, perhaps killed by the intensity of the poison.—*LaFrance Medicale.*

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SULPHITE OF CALCIUM FOR TONSILLITIS.—Norbury has obtained good results in treatment of acute tonsillitis by sulphite of lime. Suppuration is prevented, pain diminished and temperature lowered. If suppuration is already advanced the abscess is opened early, and antiseptics used. The best method of administration is by fractional doses, repeated frequently. Peroxide of Hydrogen is recommended as a mouth wash.—*Courier Medicale.*

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PASSAGE FROM THE MOTHER TO THE FŒTUS OF THE STREPTOCOCCUS OF ERYSIPELAS AND OF PUERPERAL INFECTION.—Chambrellent and Sabrages. It is proved beyond doubt that pathogenic germs do pass from the mother to the fœtus. Experiments in regard to the above germs have been lately made by the authors. At the beginning of November, a rabbit at "term," was inoculated with a recent culture of the streptococcus. Five days later unmistakable signs of general infection by erysipelas showed themselves. The blood presented large numbers of chains of streptococcus. The following day the animal gave birth to two dead fœtuses.

In another case, after death inoculation of the cultures derived from it killed another rabbit by septicemia.—*Jour. de Med. de Bordeaux.*

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SULPHUR IN SMALL-POX.—Dr. Jacinto Iscar, of Valladolid, notes good results from this treatment. He gives internally precip. sulphur, 1 grm.; glycerine, 0.50 cgm.; in a cachet. The number taken daily varies according to the severity of the case. One may be given every hour to adults without gastric intolerance.

It may also be made up into a draught with glycerine and syrup.—*La Courier Medical.*

For tænia in children, Yrowitsch proposes the following:

Napthalin, 0.3 to 0.5 grms.
Castor oil, 15 grms.
Ess. bergamot, 2 drops.
Take in one dose, fasting.

TREATMENT OF PNEUMONIA.

THE therapeutics of pneumonia changes with the promulgation of every method or combination of methods put forth with more or less of enthusiasm by practitioners who have a faculty for "discovering" the discoveries of long ago. But, in all distinctly modern schemes of treatment there are certain underlying principles which are observed to be common to all methods, however variable may be the special objects sought. The old expectant treatment is shelved as barbarous, *i. e.*, as being an outgrowth of ignorance. Phlebotomy remains, but the indications for its use are universally declared to be rare. Antimonials are very sparingly employed, or not at all, and the excessive use of stimulants is, and properly, declared to be irrational.

A brief review of the older forms of treatment will not be thought out of place. Watson recommended blood-letting, antimony and mercury, and he placed the first measure above the others. Dr. T. Henry Green, whose views prevailed largely in England fifteen years ago, exhibited wines, hydrochloric acid, bitter orange, calomel, morphine and castor oil. In America the elder Flint taught that the antiphlogistic treatment did not have more power in arresting pneumonia than it had in other inflammations, though he admitted blood-letting and cathartics sometimes succeeded. He points out the condition in which blood-letting is admissible. He recommends saline purgatives, sedatives, the antimonials and veratrum viride, with warm applications to the chest. Opium he con-

siders a valuable remedy in the first and second stages. He cites quinine and alcohol, with suitable food, as the best stimulants.

Loomis rejects venesection, veratrum, aconite, calomel, antimony and the tartrate and iodide of potassium. He recommends opium, brandy, carbonate of ammonia, and quinine in large doses, and he makes a strong plea for a nourishing diet.

More recent writers have especially advocated two prominent points in treatment, the chief of these being to reduce the fever and the second to support the heart. Some form of opium (pulv. Doveri, or minute doses of morphine), is advised, together with small doses of calomel and an occasional saline aperient. It is true that some of the recent writers have warmly advocated "the plan of ignoring the temperature and giving massive doses of digitalis." But it should be remembered that this medication unwittingly gains the practical result of lowering the temperature, since digitalis, like many other medicaments containing powerful alkaloids, produces this effect, and is chiefly valuable (in these cases) because it does so. The real question at issue is: Does digitalis constitute the best means to this end? The weight of opinion appears to be that it does not, and less toxic, while more specific, drugs are almost universally preferred.

To meet this essential condition of lowering the temperature, while at the same time soothing pain and inducing a gentle diaphoresis, the preference is given to phenacetine, either alone or in combination with appropriate adjuvants. The evidence in this direction is voluminous and conclusive; a few brief extracts from it will interest the practitioner:

Concerning the antipyretic treatment of pneumonia, Porter (*Kan. Med Catal.*) says: "When I use an antipyretic medicine, I prefer phenacetine, as being the least depressing. I have used with advantage quinine for this purpose, but the immense doses of quinine that are required is a great objection." Wilcox advises (*Ec. Med. J.*): "The giving of phenacetine in the high fever of pneumonia, and the avoidance of opium." Ketcham (*Med. News*), writes: "I have used phenacetine with the salicylates, in these conditions, with the happiest results." Janeway (*Med. Rec.*) is reported as follows: "As to the necessity for reducing the fever in pneumonia, he thought it depended much upon the effect it was producing upon the heart and nervous system. As to the antipyretics to be used, he thought well of the coal-tar series. It was necessary, however, to watch their effects, and to remember the apparent variability in their purity as manufactured by different chemists. Phenacetine had seemed to him to vary least in its effects, probably because of its greater purity than antifebrine, which formerly he had thought well of." Mays (*St. L. M. and S. J.*), employs (in pneumonia) "a combination of phenacetine, quinine and morphine, adding atropine, digitalis or strychnine as required." Bailey (TIMES AND REGISTER), writes: "I give phenacetine more frequently than all of the other antipyretics together for the reduction of fever, and I give it without hesitation under all circumstances." Sugden states (*Ind. Med. Gaz.*), that he places phenacetine "above antifebrine and the other antipyretics, on account of the very favorable general condition which follows its administration." Bell reports (*Brit. Med. J.*), "I have often prescribed phenacetine, and have found it a reliable antipyretic, free from secondary effects. Its usefulness cannot be over-estimated." Ellis (*McLean Co. Society*) writes: "Phenactine accomplishes results not easily obtainable with any other drug or combination; Professor Palmer, of Louisville, considers the combination pill of quinine, salol and phenacetine 'a specific.' He says: 'In my experience it has never disappointed me.'" According to Thomson (TIMES AND REGISTER), "Phenacetine, as an antipyretic, is to be preferred to all other remedies, especially where heart trouble exists. Seven and one-half grains every four hours take prompt and reliable effect." Roe (*British Med. Jour.*) praises "the influence of phenacetine in fevers on account of the absence of any secondary symptoms, such as vomiting and nausea, which frequently follow the administration of other antipyretics."

Barclay (*loq. cit.*) said that he had found phenacetine "most useful both as a febrifuge and an analgesic." The ad-

dition of quinine, he thought, enhanced its effect, and he eulogized this combination. Shoemaker (*Med. Bulletin*) writes: "Phenacetine is by far the safest of the antipyretics, and moreover, but few doses are usually required, when the drug can be replaced by tonics, especially small doses of strychnine or nux-vomica. Phenacetine has also the advantage of acting upon the skin." Perdue (*Med. & Surg. Reporter*) says: "In pneumonia, some give morphine, but I generally prefer phenacetine; it reduces the fever, produces sweating and gives ease; I give it in nearly all cases, with the alcoholic preparations."

Richardson (*Atlanta M. & S. J.*) writes: "I consider phenacetine the safest antipyretic in our posession at the present time."

Waugh, writing of pneumonia, (TIMES AND REGISTER,) says: "Phenacetine is the only antipyretic to be used, and that only in moderate doses when the temperature rises above 102°. The heart must be watched, and quinine, spartein or strychnine given when required." Concerning the doses of phenacetine, and its desirability in protracted inflammatory conditions, Hutchinson writes: "I consider phenacetine harmless in any quantity that is likely to be found necessary; and I have given ten grains every two hours for two days without bad result. Phenacetine may be combined with iron for long administration, and, in that form, presents the best tonic with which I am acquainted for the adynamic conditions of long continued nervous prostration, from whatever cause."

News.

MEDICO-CHIRURGICAL ALUMNI MEETING.

A special meeting of the Alumni Association of the Medico-Chirurgical College, of Philadelphia, Pa., was held on Saturday afternoon, January 28, 1893, in the newly furnished room of the College Y. M. C A. President, Wm. H. Pancoast in the chair. The meeting was called to take action appropriate to the death of Dr. Foster K. Quail and Dr. Harry S. Williams, graduate alumni; and Dr. Wm. G. MacConnell, a non-graduate alumnus.

Brief biographies and letters were read by the Secretary and the following resolutions unanimously adopted:

WHEREAS, Death has removed from our fellowship Dr. Foster K. Quail, an active and an honored member of the Alumni Association of the Medico-Chirurgical College, of Philadelphia, Pa., be it

Resolved, That by his early death we have been deprived of one of our brightest, most promising and honored members, one who always conducted himself in the most unexceptionable manner and who was highly esteemed by his associates.

Resolved, That we extend to his parents our deepest regrets and sympathies in their bereavement.

Resolved, That the action of this meeting be engrossed on the minute-book of the Association and a copy of these resolutions forwarded to his parents.

A similar set of resolutions were adopted on the death of Dr. Harry S. Williams.

WHEREAS, Death has removed from our midst Dr. Wm. G. MacConnell, an active member of the Alumni Association of the Medico-Chirurgical College, of Philadelphia, Pa., be it

Resolved, That the most sincere sympathies of this Association be extended to his widow and family in their bereavement.

Resolved, That the action of this meeting be placed on the minute-book of the Association and a copy of these resolutions be forwarded to his widow.

Mr. C. E. Woodruff of the Inter-Collegiate Y. M. C. A., was introduced and called attention to the fact that the room occupied by the Association has been recently fitted up and furnished at a cost of nearly twelve hundred dollars, and it was proposed to support and pay off all debts by contributions from the students, faculty and the Alumni Association. We were asked to assume a debt of fourteen hundred dollars.

This room is on the basement floor of the college building; is large and well lighted; contains several large reading tables, newspaper stands, a bountiful supply of chairs, a piano, good gas

chandeliers and the floor is covered with a handsome carpet. It is proposed to keep the room open at all times, during the college year, and to keep on file all the prominent daily and weekly secular, religious and medical periodicals. The Alumni Association had the honor of christening the room at this meeting. The propriety of assuming the debt and aiding in support of the room, was referred to the Executive Commitee of the Association.

After a lengthy discussion, it was resolved that the Association would not consider, at this time, the propriety of publishing or supporting a medical journal.

Dr. William F. Waugh, editor of the TIMES AND REGISTER, received the formal thanks of the Association for his proposition to publish the minutes of this meeting or such papers of the Association as may prove of interest for a medical periodical.

Dr. Frank Woodbury's motion to hold a series of scientific and social meetings in the college was carried unanimously and referred to the Executive Committee.

DR. HARRY S. WILLIAMS.

Dr. Williams died Sunday afternoon, January 1, 1893, at 2.40 o'clock, at the residence of his father, Dr. John Hey Williams, No. 53 Heywood street, Asheville, N. C.

He was engaged in active practice when he was first taken sick on December 25, 1892, with symptoms referable to the kidneys. He grew rapidly worse and the case was diagnosed as an obstruction in the left kidney. On the 30th, it was decided to resort to operative procedure, but the symptoms grew so favorable that the operation was not done until next day. Nephrectomy was performed by Drs. W. D. Hilliard, S. W. Battle and J. A. Watson, but the shock was such that he never rallied but gradually sank until the hour of his death. Previous to the operation he discussed the details with his surgeons.

Dr. Williams was born on September 7, 1865, this date also being the anniversary of the birth of his father and the marriage of his parents.

He was educated in the common and high schools of Philadelphia and the Venable Male Academy in Asheville. He removed to Asheville with his parents when a boy. Later, he took a course in the Knoxville Business College, Knoxville, Tenn., and returning to Asheville, held a position in Pelham's pharmacy for several years.

In 1887, he went to Los Angeles, Cal., where he was engaged in the oil business. Later he went to San Francisco, where he was a student in medicine in the Cooper Medical College. Some time later he retured to his home in Asheville. He matriculated as a student of the Medico-Chirurgical College of Philadelphia, and graduated on the 3rd of May, 1892, with honor. He received the gold medal given by Dr. Wm. H. Pancoast on commencement day.

Dr. Williams was an athlete in physical development and was very much interested in the manly sports. He began practice in Asheville and was gaining for himself an enviable reputation as a practitioner. He will be mourned as a man of unusually bright prospects, a true friend and a loving son and brother.—(Synopsis from *Asheville Daily Citizen.*)

DR. FOSTER K. QUAIL.

Dr. Foster K. Quail, son of Dr. Charles E. Quail, of Auburn, Pa., was born at Auburn, June 23d, 1869. After receiving a very careful home training he entered the public schools and attended them for six years, graduating in 1887. He began reading medicine at once and entered the Medico-Chirurgical College in the Fall of 1888, and graduated with honor in 1891. At the commencement he received the gold medal given by the Professor on Practice, Dr. W. F. Waugh, for the highest average in that branch. He was elected a resident physician of the Medico-Chirurgical Hospital, and, while servin in this capacity, entered the competitive examinations at Philadelphia Hospital, and was appointed to fill one of the sixteen positions—quite an honor when it is considered that seventy men contested for the places. He entered upon his duties in Philadelphia Hospital December 1st, 1892.

Some time later he accepted a position as physician to the Turkey Gap Coal and Coke Company at Emms, West Virginia, and soon had a very large and remunerative practice. It was his intention to remain there temporarily and then return

to the hospitals after he had gained some practical experience. His plans came to an untimely end, for, while following his profession at Emms, he became a victim to his profession and contracted typhoid fever from one of his patients. His father and a trained nurse from Philadelphia were summoned to his bedside, but, in spite of the very best care and attention he died at midnight December 21st, 1892, from exhaustion and typhoid toxæmia, after an illness of sixteen days. Burial took place in Auburn, Pa., December 27, 1892.

Previous to his last illness, Dr. Quail weighed 208 pounds; was five feet nine inches tall, and was hale and hearty. As a student, as a companion, as a Christian gentleman, as an associate in the profession, he was loved and respected by all. He was a Christian in all his acts in life, and died as he lived.

When such a bright future is cut off; when one so young and true is sacrificed; when the highest hopes of fond parents are dissipated; when the last earthly remains of mortal man are laid away, do we not often ask ourselves, Is not the present life but the preparation for some higher position in a Heavenly Home?

DR. WM. G. MACCONNELL.

Dr. MacConnell was born in Greenville, South Carolina, October 3, 1843. After receiving his preliminary education, he entered the study of medicine and matriculated as a student in Jefferson Medical College, Philadelphia, Pa., and graduated from that institution in the Spring of 1876. He began practice in Philadelphia, and held the position of Chief of the Surgical Clinic during 1878-79. Later, he identified himself with the Medico-Chirurgical College, and occupied a position as Lecturer on Venereal Diseases until the time of death. He was an active member of the Philadelphia County Medical Society, member of the Pathological Society of Philadelphia, and was elected a member of the Medico-Chirurgical Alumni Association, April 6, 1887.

After a brief illness, he died on July 10, 1892, of cardiac rheumatism. His remains were interred in Mt. Peace Cemetery.

W. BLAIR STEWART, A.M., M.D.
Secretary Alumni Association Medico-Chirurgical College.
BRYN MAWR, PA.

THE PAN-AMERICAN MEDICAL CONGRESS.

Meeting: Washington, September 5th, 6th, 7th and 8th, A. D., 1893.

ST. LOUIS, MO., Jan. 19th, 1893.

Preliminary Manifesto of the Section on Diseases of the Mind and Nervous System, Pan-American Medical Congress.

Honorary Presidents.—Drs. Jorge Diaz Albertina, Havana, Cuba; Juan C. Castillo, Lima, Peru; C. G. Comegys, Cincinnati; F. X. Dercum, Boston; J. T. Eskridge, Denver, Col.; Orpheus Everts, College Hill, Ohio; Juan N. Covantes, City of Mexico, Mexico, Allen McLane Hamilton, New York; Wm. A. Hammond, Washington; P. O. Hooper, Little Rock, Ark.; Henry M. Hurd, Baltimore; J. G. Kiernan, Chicago; J. A. McBride, Wauwatosa, Wis.; Chas. K. Mills, Philadelphia; Moncorvo, Rio de Janeiro, U. S. Brazil; Putnam, Boston; E. C. Seguin, New York; E. C. Spitzka, New York; G. Isaac Ugarte, Santiago, Chile; Sam'l Webber, Boston; Joseph Workman, Toronto, Canada.

Executive President.—Dr. C. H. Hughes, 500 N. Jefferson Ave., St. Louis, Mo.

Secretaries.—Drs. A. B. Richardson, (English-Speaking), Columbus, O.; M. G. Echeverria, (Spanish-Speaking), Key West, Fla.; Melendez y Caorea, (Hospicio San Buenaventura), Buenos Ayres, Argentine Republic; Nicolas Hortiz, La Paz, Bolivia; Carios Eires, Rio de Janeiro, U. S. of Brazil; Stephen Lett, Guelph, Canada; Blaloo, Kingston, Jamaica, W. I.; Paolo Garcia Medina, (Carrera 8, num. 277), Bogota, Republic of Columbia; Emiliano Nunez, (Galiano 19), Havana, Cuba; Jose Azurdia, Guatemala City, Guatemala; George Herbert, Wailuku, Maui, Hawaii: Secundino E. Sosa, (Hospital de Mujures Dementes) City of Mexico, Mexico; Pellais, Leon, Nicaragua; Francisco Soca, (Florida 90), Montevideo, Uraguay; Hemiterio Formez, Merida, Venezuela.

Every effort is being made to make the meetings of the Section on Diseases of the Mind and Nervous System both scientifically profitable and socially pleasant. Papers of distinguished merit from neurological students and physicians eminent in Psychiatry, have been promised.

Every physician on this continent of

America, North or South, is hereby cordially solicited and welcomed to join in the meetings of this important section of the approaching Pan-American Medical Congress; and it is hoped by unity of effort and cordial co-operation to make the Section of Nervous and Mental Diseases second to none in the Congress in fruitful results to Pan-American Psychiatry.

Let us come together from all the Americas, and make the coming convocation one long to be remembered for its scientific and social benefits to all.

Fraternally,

C. H. HUGHES,

Executive President, Section on Diseases of the Mind and Nervous System.

THE CAUSE OF BLAINE'S DEATH.

The following is the official statement of the attending physicians as to the cause of death:

"The beginning of Mr. Blaine's illness dates back some years. The earliest signs of ill health were associated with, and no doubt due to a gouty tendency which manifested itself in subacute attacks of gout, disturbances of digestion and progressive malnutrition and anæmia.

"Subsequent events proved that at this time changes were going on in the arteries of the body, which resulted later in symptoms of obliteration of vessels and in chronic diseases of the kidneys. The attack of paralysis in 1887 was connected with similar alterations in the blood vessels of the brain.

"During the summer of 1892 the evidences of failing health were more decided, and in November on his return to Washington the symptoms suddenly assumed an aggravated form. From this time, although there were periods of apparent improvement, he continued to grow worse from week to week.

"The symptoms were at first more directly connected with the kidneys, and examinations of urine showed that there was a progressive interstitial change going on in that organ, and that he had a form of chronic Bright's disease.

"In December signs of lung complications appeared, which were no doubt connected with the general disease, but as tubercle bacilli were found in the sputa it is probable that there was some tubercular infection as well. Much of the distress which Mr. Blaine suffered was associated with this disease of the lungs and his death was certainly hastened by it.

"Towards the end of December the heart began to show signs of unusual weakness from cardiac degeneration and dilatation and on December 18th, he had an alarming attack of heart exhaustion. From this he rallied, but others of the same nature recurred on several occasions. From the middle of January these attacks ceased and the action of the heart was more uniformly good. There was, however, a daily loss of flesh and strength.

"For three days before Mr. Blaine's death there was no marked change in his condition; each day he seemed somewhat more feeble than on the day before, and on the night before his death he did not seem to be in any immediate danger. Towards the morning of the 27th instant his pulse was observed to be very feeble and his breathing more embarrassed. As a result of the failing heart action œdema of the lungs occurred, and he died without much suffering at 11 o'clock.

"During the whole of Mr. Blaine's illness the digestion was well performed and liquid food, chiefly milk, was taken in full quantities. His mind was generally clear except when clouded by uræmia and disturbed brain circulation, and, although unable to express himself in words, he recognized all the members of his family up to within a few moments of his death.

"Drs. Janeway and Loomis, of New York, were called in consultation and rendered important service by their advice."

PROPRIETARY LUNATIC ASYLUMS—A movement, inaugurated at the National Liberal club, is on foot to obtain legislation with the object of putting an end to private lunatic asylums, on the ground that such institutions are prejudicial to the security of the subject. There is practically a consensus of opinion on this point, for none would care to attempt the justification of a system which makes it the interest of private practitioners *qua* hotel keepers to postpone the discharge of patients. Not indeed that we suppose

for a moment that existing private asylums are managed otherwise than on the most beneficent and avowable lines, but the very principle is faulty. It has led to grave scandals in the past, and must, from time to time, lead to similar abuses in the future in virtue of the immutable laws that govern the conduct of human beings. A great deal of unmerited abuse has, however, been cast at these institutions, for we do not believe it to be easier to procure the incarceration of a private than of a public patient. It is when they are under lock and key, remote from the inspection of disinterested parties, that the danger asserts itself. The question of doing away with private asylums altogether is a purely financial concern, and as such its solution does not present any insuperable obstacle.—*Hospital Gazette.*

CONFOUND THE PRINTERS!—The *Journal* received a *be-a-uti-ful* note from its esteemed friend and colleague, Wile, of the *N. E. Med. Monthly*, written in his well known clear, round chirography, and it being very important to the profession, gave it as "copy" to the printers; and just look what they made of it! It is too provoking! Anybody who has ever seen the doctor's handwriting can read it at a glance (but they don't know what he means):

DANBURY, Conn., De. 24, 1892.

Lim Saul:

Ipe eel exubub nite sissi ble ⌒◡ T z G. Monelz—Cohm *lu lu* che tree ale etc cobih 2. Of eye re—ie lb nomll os enfils *oo* I clo gr. duel! Cfu *nuece* c bun lun sleet buncombe z alce I t & m vin figillly ohu iley force grs. Io Tx—tonio r Ni 8 st coe PraeH. rocle. W◡◡

—*Daniel's Texas Med. Jour.*

THE French Society of Electropathy is about to manage a yearly Exhibition, which will take place the Friday and Saturday of Easter Week, in 1893. This exhibition will be held in the "Laboratoire de physique de la Faculté de Médecine" in Paris, and will include the instruments employed in electropathy, as well as demonstrations concerning electric methods, drawings, etc. The organizing committee is represented by Prof. Gariel, Drs. Tripier, Gautier, Vogt, and M. Gaiffe, constructor. Doctors and constructors are invited to call from this day upon Dr. Vogt, 28, rue Saint-Lazare, Paris, for information.

Rhode Island may be little but she has now a medical journal of her own; the *R. I. Medical Science Monthly*. The first number contains fifty-six pages, covering the little state's societies, and, like Twain's map of Nevada's toll roads, slopping over into the adjoining territories. The journal is awkwardly put together, the absence of an experienced publisher being evident. The first reading page begins with an advertisement of Brown University filling three pages; then comes three text-book pages on testing water, some abstracts, six months old, and altogether about the worst jumble of heterogeneous materials we have ever witnessed in a medical journal; editorials, news, rules for disinfection, a chapter of Hutchinson's new book, description of an operating room in Sweden, etc., etc. Rhode Island has plenty of talent to furnish a good medical journal, and ought to give the profession a much better one than that now before us.

The following appears in the *Hospital Gazette:* "Some of our American contemporaries protest against the 'effrontery' with which English journals foist their disreputable brethren on America, and several instances are alleged in which it would seem that the slur was not justified by the culprit's place of birth. Be this as it may, America has acquired a reputation for bogus doctors, and just as one uses the term 'Brummagem' to designate a certain quality of manufacture, so we now make use of the adjective American to specify a certain make of bogus doctor."

The simple fact that the persons referred to were not Americans would seem to be a sufficient reason for not designating them by that title. Suppose we apply our trans-Atlantic cousins' method to a type of rascal often seen here, and announce that "Lord Howard was arrested for forgery;" or that "The Earl of Leicester was sent up for sixty days for bilking his laundress." Of course

we are aware that these men are not really members of the English House of Lords; but England has acquired here a reputation for bogus lords, and just as one uses the term Brummagem to designate a certain quality of manufacture, so we may make use of the term "English Lord" to specify a very common species of swindler The genuine lord may not like it, but we fail to see how he can help himself.

The December number of the *Deutsches Archiv fuer Klinische Medicin* comes in the shape of a bulky volume of 530 pages, with fourteen plates, part colored, and portraits of the editors, Ziemssen and Zenker. The first paper is by Prince Ludwig Ferdinand of Bavaria, on pleurisy. Other papers are by Mueller, Hoppe Seyler, Dudlesuil, Mann, Bavellero and Riva Rocci, Fawitsky, Loos, Rennert, Fiedler and Neelsen, Oertel, Dudly, Kraft, May, Zenker, Hauser, Sandmeyer, Menicanti, Kistermann, Pfeifer Eerlach, Lange, Hilbert, v. Ziemssen and Cohen. Such a collection of notable names is rarely seen on the index of one issue of a periodical.

The Amick people are going it with a vengeance! The *N. Y. Recorder*, of January 18th, has three pages devoted to the exploitation of this nostrum. In one page is a collection of bad cuts of the great physicians of this and former times: Harvey, Jenner, Gross, etc., among whom Amick looms up, like a big copper cent among a lot of gold dollars. If printer's ink can develop this into a craze, these people will reap a harvest that will make Bergeon, or even Keeley, hide his diminished head.

Phenocoll hydrochlorate is recommended as a substitute for quinine in the treatment of malaria. The dose is twenty to twenty-five grains, repeated every two hours, till three doses have been taken; the last being two hours before the time for the paroxysm. The drug is continued some time after the attacks have ceased. It may be used where a quick action is desired, for children who will not take quinine, or when the latter disagrees.

The Medical Week, the English edition of La Semaine Médicale, makes its first appearance on our table. The contents comprise Bristowe's Lettsomian lecture, a clinic by Lemoine, society reports from London, Dublin, New York, Paris and Berlin, some abstracts and medical news, with an index of current medical literature. The subscription is $2.00 per annum. The number contains twelve folio pages.

Small-pox is showing itself in a number of places in Great Britain. In Leicester fifteen children taken to the hospital for other affections have there contracted small-pox. In Southampton a difficulty occurred that may at any time be seen in Philadelphia. A small-pox case from a steamer could not be admitted to the hospital, as it was occupied by patients with other infectious diseases. He was treated in a private house, where the isolation was so inefficient that over a dozen cases were contracted from him.

In the *Buffalo Medical aud Surgical Journal* Hubbell describes ten cases in which the electro-magnet was employed to remove bits of steel from the eye. His conclusion is that by the electro-magnet, in a great majority of these cases, the eye can be saved, with some vision; while without it almost every one would be totally lost, and possibly cause the loss of the other eye also.

Marion Crawford is evidently utilizing his social opportunities during his present American visit for a study of American women, and in the next issue of *The Ladies' Home Journal* he will give the results of his observations and describe "The American Woman" as she appears to him after an absence of ten years; in what respects she has changed, and whether she has improved in her dress, manners and tendencies.

Any reader who will take the trouble to send for a sample copy of the *Weekly Review*, of Boston, Mass, (P.O.Box 210); the *Literary Digest*, (Funk & Wagnalls, N. Y. City); or, *Science*, (874 Broadway, N. Y.), will find in either of these journals a literary treat. Every doctor is interested in science and in literature,

and in these periodicals he will find a resumé of the latest work of the best men. For ourselves we regret we did not know of these journals sooner.

INDIGENOUS TO THE "STATES."—Some of our American contemporaries protest against the "effrontery" with which English journals foist their disreputable brethren on America, and several instances are alleged in which it would seem that the slur was not justified by the culprit's place of birth. Be this as it may, America has acquired a reputation for bogus doctors, and just as one uses the term "Brummagem" to designate a certain quality of manufacture, so we now make use of the adjective American to specify a certain make of bogus doctor. The adjective, indeed, is descriptive of quality rather than geographical origin, but one may readily admit that in the course of another decade or two the innuendo conveyed in the epithet—for epithet it is—will probably have lost its point. Indeed one has only to recall one's student days to appreciate the rapid advance of American medical science. Then, indeed, the American doctor was a bye-word and a jeer, and their books would not sell at any price. Now, by contrast, it pays American medical publishers to have branch establishments in England; statistics of Yankee origin are accepted and made the basis of discussions at the most conservative of British medical societies; the works of American surgeons and physicians find a ready sale, and a large number of appreciative readers, while their surgical procedures are eagerly imitated, and, as far as possible, improved on. Even American therapeutics secure a hearing and the pharmaceutical trade over here has been literally turned topsy-turvy by the enterprise and originality of a single firm of American pharmacists. —*Hosp. Gazette.*

THE "RHINITIS" TABLET.—In the TIMES AND REGISTER of August 20, 1892, we spoke in high terms of a tablet manufactured by the H. K. Mulford Co., and called the Rhinitis tablet. During a summer among the fogs of Bedford Springs, this tablet proved a very efficient means of breaking up the acute catarrhs so prevalent among the guests. Unfortunately, the manufacturers have changed the formula, but continued the name; so that they now dispense as the rhinitis tablet one that does not fulfil the indications for which the original proved so effectual. The latter was composed of quinine and camphor, ½ grain each, and extract of belladonna, ¼ grain. The effect of the belladonna was marked. The present rhinitis tablet contains ¼ grain each of the camphor and quinine, and ⅛ grain of belladonna (not the extract). Of these, we have given twelve at a dose without obtaining the effect produced by one of the old form. We deem it but just to ourselves that having spoken favorably of the original "rhinitis" tablet, we should warn our readers that the remarks made apply only to these, and the present rhinitis tablet will not produce the effects mentioned. The manufacturers have signified their intention of replacing the old tablet on their list with some distinctive term; probably calling it the "original formula rhinitis."

RECENT OBSERVATIONS ON SULFONAL.—In a recent number of the *Birmingham Medical Review*, Dr. T. Sidney Short states that in his clinical experiences with sulfonal he often obtained a more rapid action from the drug than he had supposed it to possess. Doses of only fifteen grains sometimes produced sleep in a very few minutes, and he cites five cases in which the same quantity caused sleep in fifteen minutes. He writes: "I cannot point to any derangement of respiration, circulation or appetite, as following its use, nor any case of cyanosis." Dr. Harding (*Medical World*, March 1892,) writes: "I have used sulfonal in an extensive country practice and find that it produces natural sleep and has no other action; in sulfonal we have a safe hypnotic that can be administered to the aged as well as to those suffering from organic diseases, and it works admirably with children. Sulfonal will quiet the irratability of teething; it will often prevent convulsions and relieve nervous excitement, and it induces a peaceful sleep. Sulfonal does not constipate, depress the system or impair the appetite; it leaves no sequelæ and is accompanied by none of those

phenomena sure to accompany the administration of opium, chloral, and the bromides.

The Columbian University in Washington, has decided to receive no more female students. The reasons given are, that male students do not care to attend a school with women; and that co-education is demoralizing.

The London Post-Graduate course is growing in popularity; the entries in 1890 being 121; in 1891, 172, and in 1892 reaching 223. Twelve courses are now given at ten hospitals. The students come from great Britain and her dependencies, with a few from the United States.

Strabo said that bituminous earth and oil applied to vines prevented their destruction by parasites. A trial of this method in France has succeeded in heading off the phylloxera.

Glycerine has been recommended as an efficient remedy for biliary colic. Haldeman (*Cleveland Med. Gaz.*) advances reasons for believing that the beneficial action is due to the solvent effect of the glycerine on the calculus.

Life is evidently lengthy in a land where a medical journal can survive such a title as *The Medical Times and Hospital Gazette:* The Journal of the General Practitioner's Alliance.

Dr. F. Stuart, of Evanstown, Ill., collided with an express train on Jan. 16, smashing his buggy and left arm, and dislocating his left hip. The train was not hurt.

The Charlotte Med. Journal records a case in which a man lived ninety hours after his right ventricle had been pierced by a pistol bullet.

The *New York Therapeutic Review* appears as a quarterly, edited by Dr. Paul Gibier, and devoted to the interests of the New York Pasteur Institute.

The Doctor of Hygiene takes the place of Charles Avery Welles' journal, known heretofore as *The Doctor*.

Ten grains of exalgine produced toxic symptoms resembling those of acetanilide, in a child two years old; who, however, recovered in ten days.

Mosetig-Moorhof claims that inflation of the peritoneal cavity by sterilized air, after drainage, has cured a boy of tubercular peritonitis.

Adamkiewicz says that boric acid is the only antiseptic that can be safely applied to the brain.

A few days ago, one of the boys at the eating club lapsed into poetry as follows:

"Apple pie without the cheese
Is like a kiss without the squeeze."

He declared it was original, and that he couldn't help such things at times. —*The Corpuscle.*

Salipyrin can now be obtained in this country; the legal questions having been solved.

Lysol has received high commendations in Germany as a substitute for carbolic acid.

Tolypyrin and tolysal are new products derived from the antipyrin base. Reports are expected concerning their use at an early date.

Pellagra is increasing in Italy; especially the form known as "mania pillagrosa."

Antipyrin has proved useful in lead colic; sixty grains being the daily dose.

The issue of February 25, will be devoted exclusively to Diphtheria.

The Times and Register.

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DIET, DIGESTION, AND THE VOICE: WITH MANY REMARKS OF VALUE TO ALL VOICE-USERS.—DO'S AND DONT'S.*

By DR. J. MOUNT BLEYER,
New York City.
[Editor *Electrical Review*, etc.].

AFTER a number of years' experience in the treatment of diseases of the vocal organs in singers, actors, clergymen, lawyers, and others, I found that "diet," in connection with the proper constitutional and local treatment of these organs, plays the chief rôle in order to reach the goal, "*success*."

A good cook rises to the dignity of "*artist*." He may rank with the chemist, if not with the physician. God made the food, and the devil the cooks.

"No digest of laws like the law of digestion."—*Moore*.

Our good neighbors, the French, or rather the philosophers among them, have asserted that the perfection of man and his species depends upon attention to diet and digestion; and, in a material point of view, they are not far wrong; and, indeed, in a non-material point of view, it may be said that the spirit without judgment, is very likely to be exposed to indigestion; and perhaps ignorance complete is to be preferred to an ill-digested erudition.

*Read before N. Y. County Medical Association, November 21st, 1892.

With diet and patience Walpole thought all the diseases of man might be easily cured. Montesquieu, on the other hand, held that health purchased by vigorously watching over diet was but a tedious disease. But Walpole was nearly correct, while Montesquieu was not very distant from the truth. Dieting, like other things, must be undertaken on common-sense principles; for though there be multitudes of mad people in the world, society generally is not to be put upon the regimen of "*Bedlam*."

We live, not by what we eat, but by what we digest; and what one man may digest another would die of attempting. Rules on this subject are almost useless; one must be able to individualize every case himself, and those that come under his notice. I have found that each man with certain hints, may soon learn the peculiarities and powers of his stomach . . . . health and disease in this respect; and this once ascertained, he has no more business to bring on indigestion and other disorders connected therewith than he has to get intoxicated or fall into debt. He who offends on these three points deserves to forfeit stomach, head and his vote.

Here are several important rules always to be observed; make them your religion.

The golden rule is "moderation and regularity;" he who trangresses the rule will pay for it by present suffering and a "check after Christmas."

A false hunger ought not to be soothed, nor a false thirst to be satisfied, for satis-

faction here is only adding fuel to a fire that would otherwise go out.

"Festina lente" is "Latin de cuisine" for "eat slowly," and it is of first-rate value. He who does so gives best chance for healthy chyle; and that wanting, I should like to know where the *post-prandial* enjoyment would be. Without it digestion is not, and when digestion is away Death is always peering about to profit by its absence. "See to it," as the Chinese chap says.

We must neither act unreservedly on the dictum of books nor copy slavishly the examples of others if we would have digestion in a healthy condition. There is a self-monitor that may safely be consulted. Of his existence there can be no doubt, for every man who wakes with a headache most ungratefully blames the same monitory "self."

So let me say that among the seventeen hundred or more works which exist on the subject of diet and digestion, the sufferers may study the question till they are driven mad by doubt and dyspepsia, and difference of opinions among the doctors.

Every man may find comfort in the reflection that with early hours, abundant exercise, generous and proper suited diet, but not too much of it, and occupation, without which a worse devil than the former enters in possession of the victim—dyspepsia cannot assume a chronic form. It may be a casual visitor, but it will be the easiest thing possible to get rid of him. But philosophy has said as much from the beginning, and yet dyspepsia prevails and physicians ride in carriages! Exactly! And why? Because philosophers themselves, like the Stoic gentleman in Marmontel, after praising simplicity of living, sink to sleep on heavy suppers and beds of down with the suicidal remark that "Le Luxe est une j'olie chose."

I hope that these few philosophical, or rather common-sense rules, in this essay will bring many to their senses and that much good may be derived from them.

ALIMENTATION.

This may be placed under two heads: the healthy and unhealthy alimentation.

The healthy alimentation is the feeding upon that or those kinds of foods which any animal or organism is designed to live upon, as indicated by the structure and functions of its digestive machine.

The unhealthy alimentation is the feeding, again, upon food which the digestive organs cannot readily and perfectly digest. Many instances can be given: We should not for a moment think of feeding our cattle, horses, and sheep upon lean or fat meats, neither do we expect to feed cats and dogs upon hay, corn, and oats. If such digression be attempted, we should soon have all these animals diseased, for this would constitute unhealthy alimentation or the feeding upon food for which the digestive organs were not intended. That which would be healthy alimentation for horses, cattle, and rabbits, would be unhealthy alimentation for the cat and dog, and *vice versa*. What would be healthy alimentation for purely herbivorous and purely carnivorous animals would be unhealthy alimentation for man, since he partakes structurally of both the herbivora and carnivora, and belongs to the omnivora.[1]

"Food productive of disease in the horse, ox, and rabbit might be healthy food for the dog and cat, while that which might induce disease in either the purely herbivorous or the purely carnivorous animals might be healthy food for man, and in him promote health. Hence it is evident that experiments performed with food upon the horse, ox, or rabbit cannot in their result be applied either to the dog and cat or to man. In experimenting in this direction, each class must stand alone, and must be studied independently of all others."

The structure of a human being is about one-third herbivorous and two-thirds carnivorous. Man in his native wild state feeds mainly upon game and fish, with much less than one-third of vegetable products. It is found that in this state he is free from some disease, as consumption, Bright's disease, diabetes, locomotor ataxy, paralysis, fatty diseases of the organs—as the heart, liver, etc., tumors, and the various forms of cancer; also he escapes most of the infectious troubles, measles, small-pox, scarlet fe-

[1]Salisbury, The Relation of Alimentation and Disease.

ver, diphtheria, etc. Such diseases here cited reach him when he comes in contact with civilization.

There exist certain people, as well as nations, who have become herbivorous. Long generations of vegetarianism and inherited organic tendencies have inured their constitution to this mode of living.

We are told that in such individuals the stomach, or meat-digesting organ, has but little work to do; the result is that the pyloric valve is paralyzed and thus remains open permanently, and the vegetable food passes through the organism, being chiefly digested by the biliary secretions, small intestines and their glandular appendages.

It has often been shown and observations made that such individuals, as a rule, have less nervous and muscular endurance than those who eat meat or a mixed diet. The English officers tell us that while their army was serving in India they deemed it always necessary to send their native troops off on a march one day ahead of the English soldiers, in order that the natives might arrive at the given point on the same day.

Man in the wild state suffers rarely from death brought on by disease; if so, it is usually due to an accident or to old age. The death-rate is small in youth and middle age, accidents excepted. Dr. Salisbury, in his book on "The Relation of Alimentation and Disease," states many important and valuable truthful facts bearing upon this subject. He says: "I have known many North American Indians of temperate habits who were hale, hearty and straight as an arrow when over one hundred years old. Among the native wild tribes of Central America many of them are found to be considerably over one hundred years of age. In one instance, where records have been kept, a man now living in Rio de Janeiro—a Spanish doctor—is known to be over one hundred and ninety-three years old, and who is yet quite strong and active, mentally and physically. This man is also a meat eater.

"There is no reason why we of civilized communities should not live to an even greater age than man in the wild state, if we would but avoid the causes of the fatal diseases previously enumerated. These causes are simple ones and have their origin in our daily habits of living, in the cultivated taste for unnatural nutriment preparations and drinks, and in the various exposures to infections—cryptogamic and infusorial—developed in and by abnormal surroundings, states and conditions. All of these may be readily avoided if we will but read a few plain lessons from the book of nature ever open to us."

THE DUAL CONSTRUCTION OF MAN, AND HEALTHY ALIMENTATION.

As a general rule we have twenty meat teeth and only twelve vegetable teeth, while four of the latter, the "wisdom teeth," are poor apologies as grinders. The stomach in man is a purely carnivorous organ, and is designed, both in structure and function, for the digestion of meats without fats. The small intestines, with their glandular appendages (liver, pancreas, and glands of Lieberkuhn and Bruner), are herbivorous mainly, and are designed to digest vegetables, fats, and to change starch into glucose. The biliary secretions, and those of the glands of Lieberkuhn and Bruner, are for digesting farinaceous and vegetable products generally. According to this construction man is designed to feed both upon vegetable and animal food.

Healthy food would consist in a diet of about one part of vegetables, fats, and fruits to about two parts of meat without the fat and connective tissue of the meat. Sweets and fruits are to be taken in moderate qualities. Fruits should only be used after breakfast and dinner, always on a full stomach, never at night. Supper should consist of all kinds of broiled fish, lean broiled meat, broiled chicken, oysters, lean broiled chops, beef tea, milk, soups, beefsteak, boiled eggs, boiled or raw only, boiled ham, (lean), bread, rice, tapioca, bread, sago, custard, puddings, etc. At night the main factor is to have all quickly digested food, and such food as will not produce either flatulence or fermentation. These two, flatulence and fermentation, never exist one without the other.

Foods, therefore, must be selected as can be most readily digested in health or disease—especially from the vegetable kingdom. When food only is eaten that

digests and assimilates well, there is no fermentation or flatulence in the digestive organs. Then we find that the entire economy assumes its normal functions, or, if otherwise, the deviation from health to disease is immediately noticed.

All vegetables and fruits can be partaken of in a healthy state of the digestive organs; also the starchy and other nutrient products of grains.

THE WEAR AND TEAR OF THE BODY AND ITS RECONSTRUCTION.

We know that every action of the animal body, whether mental or muscular, is accomplished at the expense of, and accompanied by the destruction of, a portion of the fabric of which man is composed. That which is destroyed is at once carried away and cast off from the body, and in its place fresh material is supplied by the blood. Hence the desire for food which is received into the stomach, and, if solid, is there digested until brought to such a state of fluidity that the suitable part of it may be conveyed into the blood, as the whole mass passes through the long tract of intestines. By this means the blood is fed by the stomach and intestines, and the tissues by the blood.

So we can see what an important part the proper food plays in healthy and unhealthy alimentation, and what good or harm may arise therefrom. Further I will show how many diseases are due to unhealthy alimentations, and how they can be prevented and cured by proper food. Most of the catarrhal troubles of the nose, throat, chest, and ear can beyond a doubt be blamed to improper feeding, which I have proved to myself in many cases which came under my care.

Many patients and doctors have attributed the causes of these ailments to other injurious modes of life, occupations, etc. "But why search in the dark, when light can be shed?" The digestive machine can be taken to account ninety times out of a hundred. I have cured many cases of old-standing catarrhal troubles of the nose and throat by a simple, rigid regimen and local treatment. The patient, of course, must be obedient to his master, otherwise he will fall back to his old condition. Proper and healthy feeding, when once begun, must be kept up for the entire life. Deviation therefrom one must always pay according to the ratio of his deviation.

THE COMPOSITION OF FOODS.

The constituents of food are composed of the various elements known to exist in nature; only a limited number enter into the constitution of living bodies. The following is a list of those found as constituents of the human body; carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus, chlorine, sodium, potassium, calcium, magnesium, iron, fluorine, silicon, manganese, aluminum, copper. The first four,—namely: carbon, hydrogen, oxygen, and nitrogen, exist in far larger quantity than any of the others. As for those which occur toward the end of the list, they are present only in exceedingly minute quantity, if indeed, they are invariably present; it is more than doubtful if they are to be regarded as essential constituents.

The food being the source from which the elements forming the constituents of the body are derived, it follows that food must contain all the elements which are met therein. No article can, as food, satisfy the requirements of life that fails to comply with this condition.

THE COMPOSITION OF MAN AND HIS NUTRITION.

About two-thirds of the body of man is composed of water, and the remaining one-third consists of substances supplied by the solids of the food naturally taken by him. These latter may be conveniently distributed into four classes—*i. e.*, (1) nitrogenous substances, richest in flesh or meat; (2) fatty or oleaginous matter; (3) starchy or saccharine (sugar) compounds; and (4) mineral matter or salts. A supply of all these different kinds of food, as aforesaid, is necessary to maintain the body in health, and they are, therefore, found in proper proportion in the natural provision of milk. Cheese also is nitrogenous substance, butter a fatty matter, lactose, or sugar of milk, represents the starchy or saccharine class, and there are also abundant salts, the whole being dissolved in water.

For further details upon the subject, consult any physiological work.

Although meat or animal food is the

richest in nitrogen, there exists an abundant quantity of that element in many vegetables, such as gluten, wheat, beans, peas, etc. It is consequently practicable to live in health without eating any meat, and on this account some persons advocate a purely vegetable diet. This diet has also its good sides and its bad ones.

The so-called vegetarianism holds a popular sway at the present day, and can justly boast of influential and able supporters. It is boldly claimed for it that it is the natural dietetic system of man, that for which he is made and best fitted; that, when adopted, it, in the vast majority of cases, promotes longevity and vigor; that it bothcures and prevents gout, biliousness, rheumatism, epilepsy, dyspepsia of every shade, or grade and not a few other complaints; and that it is cheaper than mixed diet.

Looking over the geographical area, the vegetarian points to the vegetarian feeders of to-day—the Arabs, the Turkish porters at Smyrna, the Chilian miners, the Russian peasantry—as examples of muscular strength and of robust health; coming to history, we find the Greeks of Leonidas, the Persians of Cyrus, the Swedes of Gustavus Vasa, among groups of men; Pythagoras, Socrates, Seneca, Buddha, St. Chrysostom, Milton, Byron, Voltaire, Schiller and Linnæus, among individuals, solemnly paraded before us as the products of a vegetarian diet; while even comparative anatomy is pressed into the service, and our near anatomical relative, the monkey, is brought forward as a strict vegetarian to shame or to convince us. Like all systems founded on a one-sided review of history and our limited and often unintentionally biased personal observation, vegetarianism, propounds great truths of wide but, alas! not of universal application. It speaks of truth, but not of the whole truth.

It is, among systems, a fine specimen of the limpid kind but it cannot justly claim to have covered the whole rock of scientific truth.

In a book [1] written by A. E. Bridger, B. A., M. D., F. R. C. P. E., we find an attempt, to solve the riddle of the successes and failures of vegetarianism, Among the successes of the vegetarian regimen, he says. "That it generally promotes mental clearness, and favors a calm, even philosophical frame of mind, and that it holds in check the passions, is true; that also it is a most efficient means for the prevention and cure of the gout, rheumatism, biliousness, some forms of epilepsy, and most varieties of gastric and intestinal dyspepsia, I think must here, in justice for the system, be conceded too; but this is not due alone to the superiority of the vegetable element, but to other easily traced causes."

What, then, is the rationale of the process? Are the benefits derived durable? Are they ever purchased at grave risk to life?

These questions are answered as follows: "The effects observed are the direct and natural consequences of a diminution in the supply of the body of albuminous food, and probably to a slight extent also of the substitution of the less complex form of vegetable albumen for that derived from meat. Now, presuming that the vegetarian takes his direction from official sources, such as the Vegetarian Society, and eats, according to their direction, a certain amount of seed food—*i. e.*, peas, beans—(these two should be eaten sparingly, as the human stomach cannot digest the double sac in which they are enveloped, unless otherwise prepared beforehand) — lentils, whole wheat meal, oatmeal, gluten, maize-meal, fruits, vegetables, etc., per day, he will seem, when he turns to the tables of the relative food value of the various articles and compares them in quantity and composition with his former meat supply, to take as much tissue food as formerly, or even a little more.

This may be a fact as far as the mere act of swallowing is concerned, but is by no means true of the amount assimilated, of that, in fact, which passes into the blood to assist in tissue repair; and this for the simple reason, that in vegetable seeds the intimate union of albumen with starch and fat, and the hard covering of such seeds as escape the teeth or the cooking process, tend to prevent the rapid digestion of albumen in the stomach which taken place in the case of meat. As an indisputable matter of fact, in vegetarian diet between seventeen and twenty per cent. of the albumen is actually voided

[1] "Man and his Maladies."

with the fæces while but a minute fraction of animal albumen can escape in health, the digestive fluids which it encounters. Habit, no doubt, after a time fits the digestive faculties more completely to the consumption of such seeds, and, indeed, we know that in the horse and the cow a very active digestion even of starch proceeds in the stomach; but while habit is gradually doing its work, the body will run some risk of terminating its career—"before the grass grows the horse may starve."

In the light of this undeniable fact—a fact which has its useful side—that vegetable albumen is, weight for weight, greatly inferior to meat in its power of entering the blood current, and is therefore in considerable quantity rejected by the bowel—is explained by the extraordinary power of a rigidly vegetarian dietetetic system over gout, rheumatism, dyspepsia, Bright's disease and some forms of epilepsy.

"If you reduce very considerably the amount of albumen calling for digestion you relieve, of course, immensely, the organs whose duty it is to digest albumen, and of those organs the liver is the first. You also lessen or remove entirely, the products of mal-digestion in the organ, the direct and undeniable cause of gout, rheumatism and of biliousness, gall stone, and of many of the more troublesome secondary and more remote consequences of dyspepsia, of some forms of epilepsy and other nerve disturbances and even the direct cause of Bright's disease."

A peculiarity, and sometimes a very useful one, of the vegetarian dietary is this; a frequent action of the bowels, by reason of the unassimilability of much of the food consumed, which, while not indigestible in the sense of undergoing fermentation and inducing pain, is nevertheless, as we have seen, indigestible in the simple sense that it largely escapes the action of the gastric and intestinal fluids unsuited to such a combination. To this aperient action, to this cure of constipation, often accompanied as it is by flatulence, colic, and the absorption into the blood of the products of fermentation lying for a long time in the bowel, all of which are but too often traceable to a diet consisting largely of concentrated foods, foods deficient in waste material useful as an intestinal stimulant, may alone be traced many of the smaller and larger cures effected by such a vegetarian diet.

It might appear difficult to account, on physiological grounds, for the fact that as the bodily strength decreases, provided that the brain be not itself the seat of degeneration or disease, as in old age and insanity, nor its blood supply poisoned, as in fevers, an extraordinary condition of mental calm, not unmixed often with a strong religious bias should take possession of the seat of thought. This serene and even temper of the mind may be partly, and is more probably wholly, due to the subsidence of the passions, which may be regarded as ebullitions of nerve force, the result of over stimulation, the source of which is often to be found in excess of food, especially of meat, which possesses more than one highly stimulating ingredient. We are familiar with the mental exaltation which ensues on a full meat meal or on the consumption of a small amount of alcohol, and which may either take a general form, that of a sense of well-being, or according to circumstances and to the constitution of the individual, be diverted into special channels and concentrated on special objects.

Cut off the excess, or substitute an actual deficit, and such sensations diminish or vanish, and the individual, in place of feeling that distinct sense of stimulation, not infrequently followed by torpor, to which he has been accustomed after each full meal, and which has possibly hampered considerably any mental work in which he has been engaged, experiences but a slight and merely comforting and satisfied sensation, which in no way debars him from mental or physical work.

Vegetarianism, then, confers on its votaries the benefits of abstinence, all of which may, however, be secured on a diet mixed with small quantities of animal food.

From my experience of several years, I conclude that by this means we do not reduce so considerably the albuminoids, where such a diet is imperative. Then from that which has been debated upon, vegetarianism can often be commended, though the adoption of such an

entire rigid system should not be undertaken too suddenly, except under competent medical advice and supervision.

This course of dieting I adopt, with some modifications, in all diseases of nose, throat, ear, and certain catarrhal forms of chest diseases, complicated by Brights' disease, rheumatism, gout, dyspepsia and stomach troubles of all grades, nervous diseases, alcoholism, severe catarrhal trouble, etc.

My modification of the mixed vegetarian system consists in utilizing fats as an economizer of the albuminoids, and here I must say that a vegetarian dietary in which *animal* and *vegetable* fats *enter freely* is very much fuller and likely to be a very much more satisfactory one than that from which all animal fats except butter and cream are excluded.

Indeed, vegetarianism plus a liberal allowance of fats of all kinds is, in my experience, by far the most satisfactory dietetic regimen in such cases as gout, rheumatism, or indeed in any dyspeptic disorders that have come under my treatment, no matter how complicated. I am certain that those who will give diet a sufficient trial in the method herein put forward and described will soon see their patients delivered on the shores of health.

Individualization of all cases is to be taken into consideration.

WHAT ARE THE PRECAUTIONS IN ALIMENTATION TO BE OBSERVED WITH A VIEW OF PRESERVING THE INTEGRITY OF THE VOICE?

I find it is obvious, in the first place, that a choice should be made of those articles of diet which do not tax excessively the powers of the stomach to get rid of them. Unhealthy alimentation always acts as a cause of disease, where otherwise healthy alimentation or feeding upon such foods as the system can well digest and assimilate is always promotive of health.

Special feeding, indicated by the condition of the system, acts as a means of cure in all diseases arising from unhealthy feeding. By special feeding in any disease is meant the living on precisely such food as can be most thoroughly digested and assimilated, or upon such food as the diseased tissues require, and upon no other. When living in this way the system is steadily and gradually getting into better order, the appetite improves, the urine becomes clear and of the proper density and quantity, the fæces healthy in consistence and color, the skin moist and soft, and all the mucous surfaces about the entire air passages and elsewhere take upon themselves a normal state. There are many diseases arising from unhealthy feeding, too numerous to cite here, but a few which directly interest us are the majority of cases of loss of voice,[1] several forms of deafness and diseases of the ear that have not resulted from injuries, poisons, exposures, and infections; all catarrhs, thickenings and fibrous diseases of the digestive organs and air passages (aside from those caused by injuries, poisons, and infections); anæmia in all its forms; consumption in all its phases, including "chronic diarrhœa;" dyspepsia in all its forms; rheumatism in all its varieties; "asthma in all forms, except such as result from animal and vegetable parasites, etc." "The point of attack, in any given case, is determined by the previous weakened state of the nerves and tissue of a given part. "The weakest, most exposed, most abused, and most used part or organ falls first a victim, because the operative influence brings such part or organ into a condition fitted to take on diseased action. Disease always proceeds along the line of least resistance." If we feed as nature designed us to do, the organs and all tissues may be thus maintained in perfect health. They become diseased if we depart from the "straight and narrow path" in which we should travel gastronomically. We may no doubt look to the foods and fluids of civilized life for a larger causal share in those "ills the flesh is heir to."

I find that healthfully feeding those tissues which require nourishing and starving such as have been overfed or unhealthily fed, will in time restore the equipoise of an unbalanced organism.

In order to exhaust as far as possible the entire subject in this article, I am forced to lay out a plan by which I will be able to cover only the most important points. Therefore the form of do's and

[1] Dr. Salisbury, in his work, speaks in extenso regarding the following cited diseases.

don'ts has here been made use of for all voice users.

According to the Latin proverb, "water gives moderation" it behooves us to look for a few minutes into the much praised and little appreciated aqua pura.

There is nothing in nature more useful than water, but commonly speaking, you can neither buy anything with it nor get any article for its exchange. Adam Smith strikingly compares with it the usefulness and value of a diamond; the latter has scarcely any value in use, but much that is valuable may be had in exchange for it. In the desert a cupful of water is worth one full of diamonds; that is, in certain emergencies. The diamond and the water illustrate the difference between value in use and value in exchange.

Water doubtless is the natural drink of man—in a natural state. It is the only liquid which truly appeases thirst, and a small quantity is sufficient for that effect. If man had kept to water the saying would not be applicable to him that "he is the only animal privileged to drink without being thirsty." But then where would the medical men have been?

But he does well who at all events, commences the day with water and prayer.

DO'S AND DON'TS

Do take *hot-water* one or more hours before meals, and half an hour before retiring. The temperature should be 110° F., and the water should be taken long enough before each meal to allow it to get out of the stomach before the food is eaten. One hour before meals is the proper time. Take fifteen to twenty minutes in the drinking. This hot-water drinking has many excellent points It washes out the dirty, yeasty, slimy, sour stomach, before eating and sleeping, and thus prevents troubled sleep, wakefulness, fermentation of food, cough etc. The drinking must always be continued, in order to preserve the stomach from yeast plants and the products of their growth. This I prescribe in every case of any disease. I do this upon the ground that there is seldom a person found who possesses sufficiently good digestion to render the drinking and consequent washing out of the stomach useless. It is also found of importance from the fact that it quenches the thirst, a very important point in connection with voice users, and acts as a stimulant to all other organs in the performance of their normal functions.

The time for taking the water is 6 A. M., 11 A. M., 4 P. M., and 9 P. M., begin in bed.

The temperature of the water should not be above 120° F. Use a thermometer for correct temperature. The warm excites downward peristalsis, dilutes the ropy secretions of the body, dissolves all abnormal crystalline substances that may be present in the blood and urine, and everywhere promotes elimination. Further, it supplies a foundation for the thorough treatment of all chronic diseases by an internal irrigation which cleanses the entire system. Cold water drinking cannot take its place. Experiments are against it. I also found that the excessive use of cold water, both in drinking and bathing is a very great mistake. It depresses the system and wastes the animal heat. In the effort to restore the temperature of the economy, which is sensibly lowered by it, the nerve force needed by the various organs, of which we have none too much at any time, is draughted off to repair our mistake."

By the drinking of ice water this is intensified many-fold and sacrifices the well-being of all internal organs for the temporary cooling of mouth and throat. It is said, authoritatively, that if such surfaces were in perfectly normal condition, we would not crave this cooling, this taste, like the appetite for liquors, wines and drinks of all descriptions, is found to be a cultivated and abnormal one. It is further said such have no place in the healthy system; they are symptoms of disease and warm us of a sub-basic cause which must be removed. I have known confirmed drunkards, after they have been kept from all spiritous liquors, and cured of diseased appetites by the restoration of tone to the digestive apparatus, to admit that they preferred hot water to liquor in every form and to keep it up throughout life as a stimulant to digestion.

Do use a course of Carlsbad home treatment. Whenever a case comes in my hands and seeks relief from throat, nose or chest troubles, I invariably without

exception, order for him, for two weeks, twice yearly, the Carlsbad home treatment. I do this for many reasons, of which a few only pertaining to my subject, are given herein.

The home treatment is in every way the same as a course at the Carlsbad Springs, with the exception that one need not expend the amount of money and time necessary in traveling there and remaining for two to four weeks; the natural Carlsbad Sprudel salt in powder form dissolved in water is used instead of the Carlsbad water, in connection with a diet designed to assist the effect of the salts, the special ailment and the individuality of every patient being fully taken into account in the application of all hygiene factors, such as exercise, etc.

The natural Carlsbad Sprudel salt is prepared in powder form approximates in chemical composition as nearly as possible to the well-known mineral water, containing all the soluble constituents of the spring as in the Sprudel Water, and in the same proportions and combinations—(both soda and lithia being present as bicarbonates). This natural Carlsbad Sprudel salt (powder) as recommended and prepared since 1882, by Prof. E. Ludwig (of Vienna), is a white powder of a mild, somewhat salty-bitterish taste. It is preferable to the other (crystalized), on the ground that it is not deliquescent in warm weather. *It is also more palatable than the crystalized salt.* It is the very best substitute obtainable for the natural water.

There is no doubt in my mind, and I express it freely, that in most diseases of a catarrhal form, as well as other disorders, blame can be laid at the doorsteps of the *stomach;* and it is for this principal reason that such a treatment must first be instituted with every patient that presents himself with affections of this organ before any good effects from local treatment of the throat, nose and chest can be effected under any consideration.

The value of the Carlsbad waters is established by the judgment of the best known clinical savants—amongst whom I can cite Profs. Ziemssen, Germain-Sée, Lebert, Leube, Ewald, Oppolzer, Dietel, Jaksch, Zizurin, Walter, and many others who made clinical tests with this representative of the alkalo-saline mineral waters, each in his respective branch of medicine.

I come now to discuss the physiological and therapeutical action, its proper dosage, its indication in various forms of disease, contra-indications, etc.

THE PHYSIOLOGICAL ACTION OF THE NATURAL CARLSBAD SPRUDEL SALT IN POWDER FORM.

Dr. Jaworski's experiments have shown that, if medium doses (five to ten grammes, equal one to two teaspoonfuls) of the powder, dissolved in a tumblerful of water, are introduced in a normal stomach, or one very nearly normal, the first effect is to neutralize the acid gastric juice which loses its effective power for a brief time.

At the same time the mucus becomes liquefied, and other morphotic elements as well, such as zymotic organisms, assume a half-soaked, swollen appearance and become suspended in the liquid contents of the stomach. Thus within the very first fifteen minutes the salt shows itself a powerful stimulant, exciting both the mechanical and the chemical functions of the whole length of the intestinal canal.

The stimulated *mechanical* activity of the stomach displays itself by propulsion of the salt solution into the bowels. The motions of the stomach are soon followed by peristaltic movements in these organs, evidenced by internal rumbling and the escape of intestinal gases. The intestinal peristalsis increases more and more; it provokes a desire to evacuate, and before long the normal result is a clearing of the lowest part of the intestinal canal. The further the salt solution is carried into the bowels the stronger and more intense also becomes the impulse for intestinal motion, the more also do the fluid and gaseous contents, intermingled with salt solution, become accumulated in the colon, to be gradually evacuated in the form of a liquid stool highly colored with bile and often emitting a penetrating smell.

Supposing large doses of the salt to have been taken, this first motion is soon followed by other liquid stools, originating from the upper portion of the intestinal canal. The *chemical* activity of the

bowels, excited by the salts, keeps pace with the *mechanical* process. It shows itself more particularly in the upper portions and is evidenced in a *profuse secretion of gastric juice and bile.* A more abundant acid secretion then sets in, which is kept latent by the action of the alkalies (the first stage) until the latter are neutralized by the continually secreted acid. This, as a rule, occurs about half an hour after ten grammes (equalling two teaspoonfuls of the salt) have been taken. After that the acid secretion increases steadily (this is called the stage of excitation), owing to the stimulation exercised by the remaining portion of the salts still contained in the stomach, however small their quantity. After a certain time the acid secretion reaches its climax, which is more quickly reached after five grammes (equalling one teaspoonful) than after ten (equalling two teaspoonfuls). Then the acidity decreases, taking less time to do so than it did to increase (this is called the stage of recrudescence). The powder has a marked stimulating effect also upon the duodenum and the bile ducts. It reaches the duodenum within the first quarter of an hour after taking, and by that time the bile will be found to be flowing freely and for the most part to be passing downward into the stools. Synchronously with this stimulation of the mechanical and chemical action of the stomach, bowels, and liver, the absorption of the ingredients of the salt solution keeps pace likewise. The *sulphates* disappear from the stomach in one to one and one-half hours from the time of taking, and are ejected in a liquid stool. The *carbonates* are not found in the motion, but may be traced after an hour or less in the urine, which they alkalinize, so that the bicarbonate of soda must be considered as that ingredient of the Sprudel salt powder which is absorbed in the greatest quantity.

Apart from the alkalinization of the urine, there is also an increase of diuresis noticeable, which continues for more than a day after the salt is taken. Small doses of Carlsbad Sprudel salt, up to five grammes (equalling one teaspoonful), have a stimulating action on the upper parts of the digestive canal. Large doses, over ten grammes (equalling two teaspoonfuls), arouse strongly the lower parts. Small doses, when taken for some time, increase the secretion of the gastric juice. After a longer use of large quantities (over fifteen grammes, equalling three teaspoonfuls), however, it is lessened by exhaustion of the glandular apparatus. With regard to the question of how to use the Carlsbad Sprudel salt powder, the following have been shown as safe general rules by the experiments mentioned:

1. Application "per os." The most rational time for taking the salt is in the morning, on an empty stomach, immediately after awakening. In diseases of the stomach and bowels this is certainly the most appropriate time; for in the early hours of the day the salt has a chance of developing its full action on the inactive organ without other influences interfering. In diseases of more remote organs, too, the morning is generally the most suitable time. At that period the salts are most readily absorbed and carried into the blood vessels, and there is little fear of abnormal changes occurring in the intestinal canal.

When the salt is taken on a full stomach, during digestion, even in a medium dose, the food is propelled into the lower bowels in an undigested state, and is there sure to cause irritation and pain. In order to produce an active effect on a full stomach a double dose will generally prove necessary, as compared with what is sufficient on an empty stomach. If, however, the salt has to be taken during the day, an hour or two before the next meal will be the best time.

PROPER DOSES OF THE NATURAL CARLSBAD SPRUDEL SALT IN POWDER FORM.

A single small dose of the salt is two to five grammes, being about as much as will lie on the point of a knife, up to a teaspoonful; a medium dose is five to ten grammes (equalling one to two teaspoonfuls); and a large dose fifteen grammes (equalling three teaspoonfuls). As a rule one teaspoonful, dissolved in a tumblerful of water, should prove sufficient. This dose reaches a concentration of about two per cent.

That is about the right proportion and certainly the proportion of salt should not rise beyond five per cent. of the water.

Medium or large doses should be divided into two or three small ones, for one single larger dose would demand either a larger quantity of liquid than could be continually swallowed, or else would reach the stomach in too concentrated a solution.

HOW TO DISSOLVE THE SALT IN POWDER FORM.

The Sprudel salt (powder form) is, as a rule, taken dissolved in plain water. If the water is hard, the solution soon becomes turbid; and the same remark applies to the mineral water. But this turbidity does not in any way interfere with the action of the salt. The salt may also be taken undissolved or rolled up in a wafer, but in that case a proportionate amount of water should be taken immediately after.

The best vehicle for dissolving the Carlsbad Sprudel salt, as adding to its effectiveness, is the bottled Carlsbad mineral water.

The most agreeable to the taste certainly is a carbonized water or an alkaline-acidulous spring. A cold solution of Sprudel salt is best made by placing the salt in a tumbler, pouring warm water over it so as to fill about one-quarter of the tumbler, and assist the process of solution by stirring.

After the liquid is cooled, and immediately before it is taken, the tumbler may then be filled up with cold water. A tepid solution ought to indicate about 97° F., and a warm one 122°–130° F. The purgative action of the salt is, as a rule, less shown in a warm solution than in a cold. If the salt be taken warm, it should not be first dissolved in cold water and then heated afterwards to the required point, otherwise the sodic bicarbonate would be changed into alkaline monocarbonate, which is much less readily absorbed. But the salt should be at once introduced into water of the desired temperature.

HOW LONG TO WAIT BETWEEN EACH TWO DOSES.

If more than one dose of Sprudel salt powder be taken, a certain interval should elapse between the several doses. The length of this interval had best be regulated by the physician consulted. It is dependent upon the following facts: The immediate action of the alkalies of a five-gramme dose, equalling one teaspoonful of Sprudel salt (powder form), lasts not quite three-quarters of an hour, for in the third quarter they are neutralized by the acid of the gastric juice.

Each following dose remains longer in the stomach than the preceding one. As it is important in stomach diseases that the salt should maintain its action as long as possible, the intervals between drinking ought to be longer in cases in which the stomach more specifically is affected, extending to about three-quarters of an hour. In most of the cases stated below an interval of half an hour between two doses of five grammes each (equalling each time one teaspoonful) will be found sufficient. When fifteen grammes are taken in three single doses of five grammes (each time one teaspoonful), the first interval ought to be a half-hour, the second being prolonged up to three-quarters of an hour. If a *quick action* be desired, it will be advisable to shorten the first interval to about one-quarter of an hour.

HOW SOON AFTER THE CARLSBAD SPRUDEL SALT OUGHT BREAKFAST TO BE TAKEN

It has already been said that it is desirable that the salt should continue its action as long as possible without interruption This cannot be the case if the intestinal canal is forced, by food being taken while the salt is still at work, to begin its digestive action, and if the salt solution, thus becoming intermingled with food, has its chemical condition changed. The time which should elapse before breakfast must of course differ, according to the dose taken and the particular conditions of the patient. The patient may, however, be guided by the sensation of hunger.

THERAPEUTICAL EFFECT OF THE NATURAL CARLSBAD SPRUDEL SALT (POWDER FORM) IN VARIOUS DISORDERS.

The clinical experiments have shown the Sprudel salt powder to be of satisfactory therapeutical effect in the following disorders:

1. In all cases of morbidly increased secretion of the gastric juice—catarrhus

acidus (Jaworski)—it is customary to use medium doses, and, if the hypersecretion be excessive, even larger doses, for a protracted period.

If the increased acid secretion is combined with atony or moderate distention of the stomach, it will be well to employ the Carlsbad Spurdel salt (powder form) dissolved in Carlsbad mineral water.

2. In insufficient acid secretion of the stomach, small doses, at the utmost five grammes, are very effective, taken in carbonized water.

3. Acute gastritis is generally corrected by small doses of Carlsbad Sprudel salt (in powder form), taken in cold solution early in the morning on an empty stomach. Dyspepsia acquired by overloading the stomach(dyspepsia ab ingestis) requires larger doses.

4. In the treatment of ulcer of the stomach the salt has long been recommended very warmly by v. Ziemssen and Leube. In the earliest stage of the treatment one teaspoonful of the salt should be dissolved in a half-litre of tepid water and taken in three portions. The excellent action of the Carlsbad Sprudel salt in powder form in ulcers of the stomach is explained by the fact that this trouble is in most cases accompanied by increased acid secretion and acid catarrh of the stomach.

5. For washing out the stomach in cases of distention of the stomach, accompanied by a feeling of weakness or exhaustion, the Sprudel salt has proved exceedingly effective.

6. As an occasional purgative the Carlsbad Sprudel salt (powder form) ranks among the most serviceable medicines. The dose should vary according to the individual, five to ten grammes (equalling one or two teaspoonfuls) being the usual quantity.

7. In habitual constipation the quantity to be taken for a systematic course of treatment should not exceed ten grammes (equalling two teaspoonfuls). If one is compelled to make use of larger doses, it is best to take it in Carlsbad water or in acidulous mineral water.

8. In mucous catarrh of the intestine, accompanied by a tendency to constipation and coprostasis, the Carlsbad Sprudel salt powder is used to advantage in doses up to ten grammes (equalling two teaspoonfuls). In some cases the treatment may be assisted by an enema holding one to three per cent. of the salt.

9. In icterus catarrhalis the Carlsbad Sprudel salt (powder form) should be used in larger doses and in a warm solution(122° to 144° F.) at least for a fortnight.

10. For treatment of cholelithiasis and a tendency to gall stones the reader is referred to what has been said under the head of icterus catarrhalis. The same application of the salt will be found of service.

11. In fatty enlargement of the liver and in the primary stage of hepatic cirrhosis the Carlsbad Sprudel salt (powder form) in doses up to ten grammes (equalling two teaspoonfuls), is a successful means of meeting the indication to augment the blood circulation in the portal system and also the flow of bile.

12. In general obesity the Carlsbad Sprudel salt (powder form) is best used in larger doses, ten to twenty grammes per day, in tepid solutions. But a strengthening diet should accompany this treatment, or the patient will find himself too much debilitated.

13. In diabetes mellitus, in which the Carlsbad water, in most cases stops the secretion of sugar, good results have been obtained by the use of the Carlsbad Sprudel salt powder. The salt should be taken in a very weak solution, one teaspoonful only to a litre of water, and warm (122° F.), and the treatment must be continued for weeks with strict adherence to an anti-diabetic diet. The treatment should, however, be stopped if there is considerable loss of weight.

14. In gout developing on the line of uric acid diathesis the Carlsbad Sprudel salt powder should be used in a warm solution of 122° F., one teaspoonful to one litre of water daily.

15. In the subacute form of pyelitis and cystitis warm weak solutions of the salt are of particular benefit on account of their diuretic action and their property of alkalinizing the urine.

16. It should further be mentioned that systematic injections, on a large scale, of solutions of one per cent. Sprudel salt in powder form, at 122° F., have proved exceedingly efficacious in cases of amenorrhœa, metritis chronica, peri-

and para-metritic exudations, and peri-typhlitis, there having been observed a more speedy involution and absorption of the exudative matters by means of the salt solution, which was injected into the pelvic organs.

Finally, small doses of the Sprudel salt powder, about as much as will lie on the point of a knife, taken several times a day, have been very efficacious, taken after dinner, in abnormal production of acids in the stomach, in certain complaints, such as heartburn, acid eructation, belching. The salt may also be taken in the place of the peptic powders hitherto used or of sodic bicarbonate; moreover, in chronic diarrhœa, one-half gramme in one hundred grammes (equalling a wineglassful) of very warm water; in uric acid diathesis, gout and in all diseases mentioned above where larger doses taken *at one time* do not agree well, or where they act more puragative than is desirable.

CONTRA-INDICATIONS.

1. Diseases of the brain and spinal cord.
2. Fever and suppurative processes.
3 Tuberculosis, intestinal and pulmonary phthisis.
4. Cancer, cancroid, malignant tumors, syphilitic ulcers.
5. Diseases of the heart and blood vessels (atheroma, aneurism, etc.
6. Hæmorrhagic diathesis, considerable anæmia, excessive menstruation, profuse hemorrhoidal flux, etc.)
7. Senile atrophia and cachexia.
8. Cirrhosis of the liver with ascites.
9. Pregnancy with a disposition to miscarriage, hæmorrhages, etc.
10. Some conditions of Bright's disease.
11. Neurasthenia.
12. Diabetes (the severe form, diabetes diaceticus).

Don't, in the first place, ever subject the stomach habitually to over-exertion, or this organ will soon become inefficient in the performance of its functions, and the condition termed dyspepsia, or feeble digestion, will be produced. As the direct consequence of this condition, the blood does not receive a proper amount of nutritive matter and therefore the body is badly nourished. Then loss of flesh ensues, the muscles diminish in tone and vigor, and the strength becomes impaired. Among the other disturbances that occur as the result of dyspepsia is that the contractility of the muscles of the vocal organs is impaired. The respiratory apparatus also cannot expel the air with steadiness and force, and the laryngeal muscles act inefficiently. Hence the voice loses in tone and timbre, and sounds weak and wavering. More or less enervation is also produced, and this is manifested by lack of energy. Thus, such an individual appears apathetic, whilst the speech is irresolute and its delivery shows indecision.

Don't exercise the voice when the stomach is full. Physiologically we know that the process of digestion has reached its height about an hour after eating a substantial meal; the stomach is not only distended with food, but is also engorged through the determination to it of a large quantity of blood. We find at this time, therefore, that the proximity of the firm and bulky stomach to the under surface of the diaphragm greatly impedes the contractions of the muscles, and thus reduces abdominal respiration within narrow limits A further effect of the distended stomach is to compress the aorta. Hence arises a plethora of the lungs, which also interferes with respiration. For these reasons, even when the body remains in a state of repose, a certain shortness of breath is sometimes experienced after eating. It is a wise precaution, therefore, to allow an interval of three or four hours or more to elapse after a full meal before the voice is exerted.

Don't use alcohol in its various forms! I warn all voice-users against it. Why? For many reasons. The first rule to observe is temperance. This rule is more necessary for the singer than for any of the other professions. Alcohol exerts a degenerative influence over every organ and tissue of the body, and nowhere more markedly than in the mucous lining of the cavities. In the larynx it produces constant congestion, which soon leads to thickening of the mucous membrane. This condition manifests itself here sooner than elsewhere, because a very slight physical alteration is sufficient to induce perceptible modifica-

tion in the delicate tones of the voice. Thus hoarseness, which is always progressive, is one of the earliest symptoms indicating that over indulgence in alcoholic beverages has commenced to undermine the constitution.[1] When once unsoundness has been induced in any of the organs of the body, they lack the vigorous vitality necessary to protect them against the exciting causes of disease, or to promote a facile recovery should they be actually attacked. Thus any mild trouble, even if of ephemeral character, may gain a firm footing and deepen into a serious affection through the inefficiency of the recuperative forces of the body. A sore throat of a mild character, instead of being cured in a day or two, is likely to be the precursor of inflammatory or ulcerative conditions that may permanently injure the voice ; or an ordinary cough which seldom calls for other than domestic treatment, may be the premonitory sign of intense lung mischief, protracted in its course, and the cause of shattered health ever afterwards.

It is especially important to observe that the ill-effects of intemperance are not necessarily confined to those cases in which there is actual and frequent excess. The habitual use of repeated though small draughts of alcohol, in the forms of cognac, absinthe, and other liqueurs, which is often observed in singers, etc., is in proportion as pernicious as large quantities taken at longer intervals, whilst in the former case, as the physical influence of the alcohol may be scarcely, if at all, felt, the individual may be wholly unconscious of running any risk. Hence the practice of drinking habitually beer,stout, or wine, as a support against fatigue and a stimulant to further exertion, must be strongly condemned. This habit is easily contracted and hardly ever broken. All authorities on this question, such as Lauder Brunton, Prof. von Ziemssen. Dr. N. Friederich Tobold, Lennox Brown, B. W. Richardson, Dr. E. Smith, Mackenzie, Dr. Huss of Stockholm, W. B. Carpenter, etc., are loud in their protests against the employment of alcoholic beverages in voice-users.

[1] "Voice Production and Voice Preservation," Gordon Holmes, 1880

Upon this subject much has been said of great value in Dr. Lennox Brown's book on "Voice Use and Stimulants," to which the reader is referred for further information.

Nevertheless, those who have been in the habit of taking alcoholics, in some form or another, I would caution to use it in great moderation, and always largely diluted in either water or some form of mineral water; those to be highly recommended for this purpose are, firstly and above all, Giesshubl, Sauerbrunn, Apollinaris, Selters, etc.

Lennox Brown, at the close of his little, unbiased volume, remarks: "After all has been said, it has to be admitted that, while alcohol is capable of directly producing injury to the vocal organs, it is of little value as a direct aid to work; and if required is, as a rule, permissible only when work is concluded; and thus we see that, in special application to any particular organ or function, the general laws regarding alcohol do not greatly vary when applied to those of voice. A large measure of discretion may be allowed to individuals, according to their coustitutions and the habit to which they have been educated; but it must be distinctly understood that no vocal student shoud be encouraged in even a momentary belief that his calling by any means necessitates or excuses indulgence in it, either as a habit or in excess of what would be considered permissible in other vocations"—the opinion which I will always uphold stanchly, that no *voice-user* should take alcohol, in any form, if he wishes to preserve the beauty, shading, quality, and power of his voice.

Don't use pungent condiments or violent irritants of any kind ; in this category I place Cayenne pepper, mustard, hot sauces, ginger, curry and the entire class of fiery condiments.

Don't use tobacco. There are many opinions for and against smoking. Mackenzie says : "Moderation may be safely allowed, but a word of warning must be uttered against inhaling the smoke into the lungs. Smoke beyond a doubt always irritates the deeper air passages. We find the membranes there are most delicate. Don't blow the smoke through your nose or inhale it. Habit with this

weed usually produces a tolerance, and the constitutional effects of moderate smoking are most frequently imperceptible, unless in delicate individuals."

Many of the disadvantages of smoking are here given: 1. Waste of saliva, an important aid to digestion. 2. Local injury to mucous membranes, as the production of dryness and congestion both of the membranes of the mouth and pharynx. 3. A foul breath. Often the voice becomes hoarse or rough, as is observed in cigarette and cigar smokers. 4. Exhaustion of the salivary glands from over-exitation or overflow of the saliva. 5. Nicotine poisoning. This exerts a powerful depressant influence over the nervous system. 6. Nervousness. Trembling may be produced, and the brain is often unable to command the muscles. 7. Palpitation of the heart and oppressed breathing; as a natural consequence, failure, to some extent, of the vocal powers, and a hesitation in delivery. 8. The lips become dry, painful, aphthous patches appear in the mouth and on the tongue, the gums become spongy, etc. 9. The entire mucous membrane of throat undergoes changes in all smokers.

To be brief upon this question of smoking, my advice is to all singers, actors, lawyers, etc., not to smoke at all; but if already habituated to the weed, to practice great moderation.

Don't use narcotics. In our own and equally civilized communities there exists a considerable number of persons who indulge in injurious practices of this kind. The physician is frequently called to treat diseases produced by the improper use of medicinal agents. The agents thus misapplied in our life of today are opium, cocaine, chloral hydrate, chloroform, ether, chlorodyne, absinthe, etc.

Strong solutions of cocaine are used by singers and actors, to a large extent, for the purpose of relieving stenosis of the nares due to hypertrophy of the turbinated bones. Doubtless the habit is also induced by the custom of many physicians to prescribe the drug for the slightest ailments. This drug should be only employed for surgical operations. The habitual use of other medicaments of this class also produces disorders of the vocal apparatus.

Do take sufficient exercise daily. This is generally neglected, either from fear of taking cold or partly from a sort of physical laziness which is often associated with the temperament of the artist. Violent and prolonged exercise is to be discouraged. On such days when great vocal effort is to be made absolute rest is to be observed. Exercise ought always to be taken in open air.

Don't speak above a whisper or use the voice on the evening of a performance. Talking loudly is a greater exertion to the voice than singing. If the vocal apparatus is a healthy one and not abused, one can use it when he is disposed to do so, without any injury whatsoever.

Don't bundle yourself up after a performance in going home, but hold a handkerchief to your mouth in coming out in the air, and breathe through the nose, and don't talk for a while.

Don't have the room too cold or too dry. The temperature should not go down below 65° F. Select rooms in an open neighborhood where there is plenty of sunshine.

Don't engage in daily singing exercises of a high compass. Try the voice only in a moderate range, although as before said, a healthy larynx needs no restriction put on it.

Do use a tooth brush and gargle after each meal. The gargle should be made up of some mild yet powerful antiseptic which will destroy decomposed matter and micro-organisms existing in the mouth upon and between the teeth. The best disinfectant for that purpose is the medicinal peroxide of hydrogen (Marchand's) diluted one-fourth to three-fourths with water, which should be used as a gargle after each meal. Have all bad teeth filled, or removed if too carious to be preserved, and replaced by an artificial set.

Do use a nasal douche daily, consisting of a glassful of warm water to which are added one tablespoonful each of lime water and peroxide of hydrogen. This will promote healthy secretion and wash away all inspissated mucus from the nares and naso-pharyngeal space.

Don't take in excess tea, coffee, cocoa and chocolate. So much has been written on this subject which is useful, and so much more that is nonsensical, tha It

shall confine myself to a very brief summary.

In small quantities, tea and coffee stimulate the nerves and are refreshing after fatigue; but if taken in excess they often produce nervousness and tremor. Individuals of robust digestion may take tea with impunity. Delicate persons must observe the following precautions: it must be fresh and not drank except after or toward the end of a meal. It should be taken in moderation, four to six cups in the twenty-four hours being the extreme limit. Cold or iced tea is injurious. To coffee the same rules apply. Over indulgence in strong coffee and tea causes palpitation of the heart and oppressed breathing, wakefulness, feverishness, and various manifestations of disordered nervous action, as anxiety, deranged vision, indigestion, etc. Those who are professional voice users should remember that moderation even in these apparently harmless beverages should be observed in order to preserve the integrity of the vocal organs.

One of the most valuable properties of coffee is its power of relieving the sensation of hunger and fatigue. It is heating and stimulating to the system and is most serviceable in giving warmth to the body under exposure to cold. This is not only due to the warm liquid consumed, but an action beyond this is exerted. In addition to its dietetic value considerable benefit is often derived from the employment of coffee as a therapeutic agent, such as an antidote to opium poisoning, for subduing the effects produced by the immoderate use of alcoholic stimulants, for the relief of nervous headache; and it is well-known to be one of our most valuable agents for controlling the paroxysms of spasmodic asthma.

In regard to chocolate, we find that in the days of the Regency it was far more commonly consumed than coffee. In the opinion of Linnæus, it surpassed all other nutritious preparations, or that naturalist could hardly have conferred upon it, as he did, the proud name of "theobroma," —"food for the gods." Chocolate itself it not objectionable, but the vanilla, which is one of the ingredients, renders it indigestible and injurious to the nerves. Very few stomachs can bear chocolate at the daily meals. But if prepared very thin it can be taken with impunity. *Do sleep, eat, and live regularly.* Normal sleep varies much, in accordance with age, sex, and individual, and, to a slight extent, with occupation, race, and climate. The adult requires eight hours, while the aged live healthfully with but six. Women need one hour longer. Certain persons need from nine to twelve hours daily, where others, again, require six

The benefits resulting from sleep are sufficiently obvious from the effects it produces. It restores both the powers of the mind and body when exhausted by exercise. By means of sleep the muscles are again rendered active and mobile, after they have become wearied, rigid, painful, and trembling from hard labor or other exertion. I am always able to instantly detect the voice of an artist who has taken little sleep, by the power, shade, and quality which is altered from the normal standard. We know that the absence or want of sufficient sleep renders the external as well as the internal organs of sense and those of every kind of motion unfit for the performance of their office. Sleep, like diet, ought to be regulated. But sleep cannot be measured by time, as one person will be more refreshed by five or six hours than another by eight or ten. We must follow Nature, which points to night as the proper season for sleep. Nothing more certainly destroys the constitution than night-owling. It is a great pity that a practice so destructive to health should be so much in fashion. How quickly the want of rest in due season will blast the most blooming complexion or ruin the best constitution, voice, etc., is evident from the ghastly countenances of those who, as the phrase is, *turn day into night and night into day.* Sleep, when taken the fore part of the night, is most refreshing. Early rising is the natural consequence of going to bed early, and this habit implies sobriety, good order, and an exemption from many fashionable follies; so the custom among all artists and other voice-users of retiring late is certainly prejudicial to health. The one who accustoms himself to go to bed at as early an hour as his vocation permits him can seldom join the revels of Bac-

chus or what are improperly called the *amusements* of the gay world. In short, attention to this single point, which I cannot too strongly urge, of going to bed early and of rising betimes, will be found to supersede a variety of other precepts, and may be justly called the *golden rule* for the attainment of a healthy voice and long life.

There are many diseases which are due to want of the proper amount of sleep. Those who sleep at irregular periods are more easily affected by direct causes of disease, and are less amenable to the means of cure. To this may be added the equally important fact that those who are habituated to full and regular sleep recover most readily from sickness. The observation of this truth led Menanda to teach that sleep is the natural cure of all diseases.

Do live and eat regularly at all times. Allow nothing to interfere with carrying out this principle. It is a very common practice to eat a light breakfast and a heavy supper. This custom ought to be reversed. When an artist dines late his supper should be very light, but the breakfast ought always to be more solid. He should always eat three hours before using his voice or before any performance. This is of great importance.

Don't use all kind of remedies with a view of keeping the throat cool and moist while speaking and singing. Almost all professionals do this. It is a most injurious habit. These remedies, if used, should be of dietetic nature only. The traditional glass of water stands at the head of the list, at a temperature of 98° F., slightly acidulated with lemon. Don't use cold water, for many reasons given before in the essay. I find, when the throat is dry, the wetting power of water is very slight, because it will scarcely adhere to a parched mucous membrane; and further if there is the congestion of the throat, the cold water ultimately increases that congestion. Special warning is given against ice water. As a lubricating and at the same time a nourishing and refreshing drink I use entirely, and recommend highly to voice users, especially to singers and actors—*Kumysgen* (Carnrick's). This is a preparation which has only been recently presented to the profession in the convenient form of a powder. This Kumyss in powder form when prepared for use, contains every constituent of a perfect Kumyss. The advantage thus gained, that it keeps indefinitely in all climates, and easily and readily prepared, thus making Kumyss available at all times and under all circumstances. Kumysgen is a delicious effervescent food beverage, much relished and palatable. It is slightly acid in taste, thus rendering it the more useful for the purpose intended.

When the stomach is out of order, from causes like a night-off, from alcoholic excesses, etc., I order for such a patient warm water at a temperature of 110° F.—a glassful every three hours—and Kumysgen, *ad libitum* for twenty-four hours. The result is that the patient speedily is "himself again." Many other remedial agents are much in vogue among different authors, singers, actors, etc. But I would assure the reader that by proper living these can be easily dispensed with.

The artists, actors, clergymen, lawyers, etc., whom I have come in contact with, all have some new "*wrinkle*" of their own or some specific for the refreshing of their throats, or, as they say, to "keep their voice in good order during the performance

I know of many who are constantly using lozenges which contain substances of more or less decided medicinal properties, as cocaine, opium, morphine, cubebs, some expectorants, etc. If, however, the method of drinking warm water, etc., as described in the beginning of the article, is observed, many of these preparations will undoubtedly be dispensed with. Much can be said on this subject which cannot be discussed here. These lozenges no doubt have their place as therapeutic agents in certain conditions of the throat; but used as popular remedies Sir Morell Mackenzie compared their effect to that of a strong acid applied instead of oil to the joints of a delicate machine.

Do see a good specialist when your voice or throat is impaired from acute or chronic troubles, and don't begin to treat it yourself by remedies given you or those recommended here and there.

Don't use the voice when you have

taken cold, or when it is impaired from any other cause. I cannot too strongly emphasize this important point. But it is not always possible. I know well what even a short period of enforced idleness is to an artist in the full tide of a successful career, and how sorely even a week of unproductive repose may press upon the struggling vocalist. It is, however, an economy in the long run to husband for a time the powers which are the means of livelihood, that they may not be utterly lost. I know of many cases occurring in my practice where heedlessness or the inability to follow my advice has resulted in total extinction of the singing voice.

Do wear all clothing suitable for the season. Flannel or merino should always be worn next to the skin.

Don't wear corsets or lace tight. This is a custom which ought to be done away with by all female artists, although, if necessity requires the same support, a sort of elastic stay can be made and worn. This will give with the movements of the chest and not press the organs out of place.

Do have your nose and throat looked after before you begin to take up any professional career or even to study any art in which the voice plays a rôle. Many a dollar will thus be saved in the future.

Do go to the best teachers in all branches in which you wish to be accomplished in connection with use of the voice. Once a certain method learned, it will require just as much time to unlearn.

Don't breathe otherwise than through your nose. Nasal breathing is of great importance in order to maintain a healthy condition of the throat and the purity of the voice. One should also be on his guard against being led into the habit of breathing constantly through the mouth, because compelled to do so while singing.

Don't get corpulent. This will interfere with your vocal powers. The connection between fatness and scantness of breath is almost proverbial. Here we have the abdominal organs rendered almost immobile by the deposition of fat between and around them, and they are thus built up around the diaphragm so as to prevent its descent. The effects of obesity on respiration are not, however, confined to this quarter, but the motions of the ribs are also probably restricted by the chest being wrapped round with a thick layer of fat. The action of the heart is impeded by the growth of fat within the thoracic cavity, the circulation of the blood obstructed, and in consequence of this, the lungs become congested, which creates immediately a difficulty of breathing. Also the course of the blood, in its circulation through the various other tissues of the body, may be interrupted with a like result. We can thus see why obesity should be prevented.

After the opinion of the doctor is rendered, what should be done?

When your doctor gives you a favorable opinion as regards your heart and treatment of your case, you will likely benefit your general health by reducing your superabundance of fat. The best mode of procedure is the following:

The first thing to do is to reduce the dietary, but in no case let the daily amount fall below five ounces of albuminous food in the shape of lean meat or fish, etc., one and a half ounces of fat, chiefly butter, and four ounces of sugar or starchy material. Add to this from one-half to three-quarters of a pound of ripe fruit daily, except grapes, figs, dates and nuts, and at least one-third of a pound of watercress, parsley, celery, cucumbers, cabbage, kale, turnips, or asparagus.

Fluids must be taken sparingly and consist of water, coffee, or tea only. They should never be taken except as directed, and not within one hour of a meal, nor at meal times.

Exercise that will induce free perspiration, such as base-ball, lawn tennis, rowing, cycling, horseback riding, football, etc., should be taken, and deep inspirations of pure air are excellent.

Carlsbad Sprudel salt in the powder form can be used with benefit. Until recently the crystallized Carlsbad salt, which may be looked upon simply as a brisk purge, was used by the profession, but now the salt is obtained from the Carlsbad waters, which is a blending of many salts, and it may be looked upon as having other effects peculiar to itself,

and really representing the mineral water from which it is obtained. Clinicians are now using it in all those cases in which the Carlsbad water had proved itself a specific.

In those cases of general corpulency or excessive accumulation of fat throughout the system, the desideratum is to reduce the general nutrition, or rather to use up the deposited fat and prevent its proliferation. Dr. W. Jaworski, of Cracow, says that Sprudel salt given in large doses, accomplishes the result here spoken of, and at the same time prevents a new deposition of fatty tissue by materially reducing the peptonizing and resorptive power of the gastro-intestinal canal. Therefore it is found that one can treat his own case at home to do just as good an advantage by the Sprudel Salt as by going to the expense of traveling to Carlsbad itself.

It is necessary to add to the dietary and treatment for corpulency the Sprudel salt. The salt must be given in large doses of fifteen to twenty grammes daily, dissolved in lukewarm water. It also will be found advantageous to take the dose before meals. By so doing the patient will be satisfied with less food, and the nourishing properties of the food will be reduced to a minimum by coming in contact with the salt in the small intestines, where it will reduce the peptonization and absorption to a minimum.

Should all of these measures fail which is not likely, iodide of potassium or sodium in fifteen-grain doses in water, on an empty stomach twice daily for three or more weeks will help the reduction.

This brings me to the finishing point of the article, though much could still be added of value which I intend leaving for some future communication.

118 E. 16TH ST., NEW YORK CITY.

News.

Messrs. W. H. Schieffelin & Co. have issued a circular to the drug trade, defining their position in regard to piperazin. The circular states that the firm above mentioned is the sole agent for the Bayer Farbenfabriken, at Elberfeld, which owns one of the two patents issued in the United States for processes of manufacturing piperazin; this substance is not itself patented, it being a comparatively old body, described in public as long ago as 1887. It appears likely that there will be litigation over this valuable product, which bids fair to prove of unusual interest. As a remedy for gout, and all forms of the uric acid diathesis, it appears to fill an indication not previously met by any remedy. It is not a simple solvent, but appears to break up the uric acid and destroy it, for when piperazin is administered at the beginning of a gouty attack, or when such an attack is threatened, the paroxysm is prevented. If the drug were simply a solvent, the attack would be precipitated. I have employed piperazin in several cases of uricemic headache and found it gave speedy relief. In one case of gout it certainly arrested an attack, while in a case of rheumatic pains about the knees, in a lady about fifty years old, of fleshy habit, little or no benefit was experienced. In all these cases the daily dose given was fifteen grains. The piperazin employed in these cases was from the Bayer Farbenfabriken.

W. F. W.

Drs. Ricketts and Bramble, according to the Cincinnati *Times-Star*, occupy an anomalous position towards the new family medicine asssociation. These gentlemen have not severed their connection with the company, but have seemingly withdrawn temporarily. The Medical Academy has taken up the matter and it will probably be brought before the American Medical Association.

* * *

The Cincinnati *Times-Star* thinks that city needs a first-class hospital with a well-salaried staff of physicians who would give their whole time to the work of the institution.

Dr. L. Harrison Mettler, formerly of Philadelphia, is now Lecturer on Diseases of the Nervous System, at the Lakeside Hospital, Chicago.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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THE MEDICAL EXAMINERS' BILL.

CONSIDERABLE opposition has been manifested towards the proposed act to establish a State Board of Medical Examiners, and at the time of writing it appears doubtful if the bill in its present form will pass. The faculty of the Medico-Chirurgical College has adopted resolutions favoring the bill, provided it be so amended as to direct that one member of the faculty of each medical college in the State be appointed on the Board. The reasons for this amendment are obvious. Each of the colleges represents a certain vested interest; each has at stake a capital, invested under its chartered rights. Any legislation that will put in jeopardy the interests created under sanction of the charters, will naturally and justly be opposed by those who now hold the charters. The question, then, is whether the proposed law really jeopardizes the rights and privileges of the schools. Theoretically it does not; and the bill purports to make it impossible for favor to be shown to any candidate, and the only question is as to the merit ofeach. The Medico-Chirurgical College has already shown that in a fair competition her graduates are abundantly able to uphold her honor and their own; and in this respect the college has no fears. But, it is alleged by many persons, that the University of Pennsylvania, by her great social influence, and unequalled skill in medical politics, will manage to secure the practical control of this Examining Board. In that case, the lot of the other colleges will not be a happy one. No one needs to be told that with all the apparent fairness of the provisions of the proposed Act, it is perfectly easy for the Examiners to ascertain the source of each candidate's diploma, before the final vote is taken. Unless the Board is composed of men who are above temptation and devoid of prejudice, means will be found to evade any provisions that can be devised to secure impartiality. This is also the ground taken by the homœopathists and eclectics; they decline to trust themselves to the justice of any Board controlled by the regular profession.

In California this college clause exists, and at present a bill has been introduced eliminating it, and amending the law so that it is practically identical with that now before the Pennsylvania legislature. The *Southern California Practitioner* opposes the change, and any regulation of medical practice except by an inter-state board; while the *Pacific Medical Journal* pronounces the bill now proposed "moderate, comprehensive and just in its demands."

Annotation.

MEDICAL EDUCATION.

BAYARD HOLMES, in a pamphlet before us (reprint from *Jour. Am. Med. Assoc.*) discusses the question of medical education. Among other things he

states that several college journals published statements as to the "prospective calling" of the graduating class. Out of seven colleges, nearly forty per cent. of the last class were put down to the law, about the same for theology, and only five per cent. for medicine. He concludes that medicine is not attractive to the collegian and gives these as the reasons :

1. Medicine does not pay.
2. It is not attractive.
3. Post-graduate medical studies are not encouraged by college faculties.
4. Work in medicine is not credited and rewarded as in other departments.

* * * *

The Texas State University complains that although it has a well equipped medical department, with buildings, etc., endowed by the State, and a highly efficient and salaried faculty, students prefer to go elsewhere for their medical education. The cause is said to be the high fees asked, as for $160, the fees for a single term, the student can attend any of the great eastern schools, or can obtain his entire medical tuition at St. Louis or Louisville. An exchange suggests as a remedy that a law be passed compelling the graduate of an outside school to appear before a Texas Board for examination. Before doing this, it might be well to inquire whether the student ought to be compelled to attend lectures in Galveston instead of New York or Philadelphia, and why ?

Letters to the Editor.

OVARIAN CYST.

I TAKE the liberty to address you regarding a case of ovarian cyst, and fibroidal tumor, complicated with ascites. The fibroid was treated by electricity, about eighteen months ago, and greatly reduced; and the woman's general health much benefited. The fibroid does not increase in size since the above treatment, but ovarian tumors of a cystic nature seem to be rapidly growing. I have just placed her under treatment for the ascites, with the object of relieving, to some extent, the present urgent symptoms of pressure within the peritoneal sac. If you know of any treatment short of surgical interference, I would be very grateful if you would point it out to me. The lady has a horror of any surgical operation for its removal. I am using mostly in my practice dosimetric medication, dispensing the granules sent out by Dr. Abbott, of Ravenswood, Chicago. I have your Outline of Treatment, which I find an indispensable aid. No treatment is outlined in it for ovarian cyst. I have written to the Chicago surgeon that treated her with electricity for ovarian tumor. He replies, inferring that no treatment will relieve the cystic trouble short of an abdominal section; electricity not being indicated. Please reply, if it will not intrude too much on precious time, as the lady is very anxious to avoid an operation. Would arsenic iodide, or arsenic sulphide, or any other efficient alterative be of possible service in such a condition ?

W. C. D.

[There is no medical treatment for ovarian cyst. The surgical treatment elaborated by Lawson Tait in England, and Joseph Price in Philadelphia, has been so wonderfully successful that it is folly to put the matter off. Put the lady under an experienced abdominal surgeon as quickly as possible.—Ed. T. & R.]

SULPHO-CARBOLATE ; VERATRUM : TURPETH.

I WISH to thank you for introducing the use of zinc-sulpho carbolate in the treatment of typhoid fever. My results this season have been better than I ever expected attaining.

I use milk, however, as nourishment, and crowd it as much as possible; so that my patients do not become emaciated to a great extent.

I am enthusiastic in the use of veratrum viride in puerperal convulsions. To counteract the depressed respiration, I use atropine, which does not seem to counteract the desired effect of the veratrum.

A few weeks since, a neighbor's girl, aged four years, was taken, without any apparent cause, with continuous clonic convulsions, lasting about two hours. I gave her altogether about seven drops tincture of veratrum viride by hypodermic, with the happiest possible results. Hot mustard baths had no effect.

If I get a bad case of confirmed epilepsy, with distinct aura, I am going to try the

veratrum in full doses. It is the ideal remedy in hysterical convulsions.

Diphtheria is scarce here. I have had but six cases in three years. The mortality was 50 per cent. I throw out all cases of ordinary sore throat with exudation on the tonsils. Diphtheria is a dreaded disease—the worst of all.

I have had four cases which I diagnosed as membranous croup, the "croup" increasing day and night. Three cases got well by using "turpeth mineral" (hydrarg. subflav.), as an emetic. The fourth case died in two or three hours after I was called, it being at death's door when I first saw it.

J. C. McALLISTER, M. D.
DRIFTWOOD, PA.

Book Notice.

ALCOHOLISM AND ITS TREATMENT. By J. E Usher, M. D., New York, G. P. Putnam's Sons, 1892.

Dr. Usher has presented us a very useful little book, on alcoholism as a disease, its pathology, etiology and treatment. He gives details of the treatment by specialists in all parts of the world, especially in America; where a trip to the various sanitaria appears to have strongly impressed him. No practicing physician can read the book without profit.

The Medical Digest.

FRENCH NOTES.

Translated by E. W. BING, M. D.,
CHESTER, PA.

ABUSE OF INTESTINAL ANTISEPTICS.

INTESTINAL antisepsis may be abused in two ways, by excess and by neglect. By excess, when it is not needed; by default, when, although indicated, it is not carried far enough.

1st. As an example of useless antisepsis, is the case of hyper acid dyspepsia. Why give antiseptics in this case when the hydrochloric acid in excess is an antiseptic of itself? The proof of it is the odorless character of the gas and stomach contents, which does not exist in the *hypo* acid conditions, where, on the contrary, there is putridity of the stomach contents and the stools. Thus it is not exact to say, as Bardet and Dujardin-Beaumetz do, that in hyper-secretion of hydrochlorine acid, "antisepsis of the intestinal tube should be the first rule of treatment." Where antiseptics are needed, they should be given in considerable doses. Huchard uses: Benzo-naphthol, 20 grams; powdered charcoal, 5 grams; divided into 30 capsules. Two, three or four times a day, before and after each meal. He prefers benzo-naphthol because it unites the principal requirements of a good antiseptic, viz.: insolubility and innocuousness, etc.—Huchard, *Rev. Medicale.*

—

FOR LOCAL ANESTHESIA.

Chloroform . . . 10 grams or ʒ iiss.
Sulphuric ether . . 15 grams or ʒ ii.
Menthol . . . 1 gram or grains 15.

Spray on part, anesthesia complete in one minute and lasts for five or six minutes—useful in applying sutures.—*Dobisch.*

—

FOR TOOTHACHE.

Chloroform . . . . . } ʒ iss.
Laudanum . . . . . }

Creasote . . . . . } ʒ iiss.
Tr. benzoin . . . . . }

Locally.

Or

Chloral Hydrate . . . . } 5 parts.
Camphor . . . . . }

Cocaine . . . . . 1 part.

For local use.—*Rev. Medicale.*

—

SOME CASES OF SYPHILIS OF THE PHARYNX AND OF THE LARNYX.

(Irsai, Rev. de Laryng.)

The rapid cure of these grave cases justifies their publication. In two cases, the difficulty of respiration was such that tracheotomy became necessary. The publications of Lukaseivitz persuaded the author to try intra-muscular injections of a five per cent. sublimate solution, using a syringe full (hypodermic) once a week, in the buttocks, each side alternately. In two cases the injections performed a rapid cure. There was neither stomatitis, salivation nor severe pain or infiltration.—*Rev. Gen. de Med. etc.*

The Times and Register.

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DIET AND VOICE.

By EPHRAIM CUTTER, M. D.

[INTRODUCTION.—This subject comes under the head of the relations of music to medicine, for speech is closely akin to song, save in the shorter length of its basic vowel tones. The writer is glad to respond to a call so much in line with his thoughts and delight.]

THE word diet is here taken to mean the same as food or any substance taken into the body through its natural channels from without, that normally becomes a part of the tissues of that body or serves for its sustenance through the functions of assimilation, digestion, nutrition, etc. Foods may be divided into three classes:

As to State: 1. Aerial; 2. liquid; 3. solid.

As to Quality: 1. Mineral; 2. animal; 3. vegetable. These states and qualities run into each other. For example, aerial food is mineral; liquid food is mineral, animal, and vegetable; solid food is mineral, animal and vegetable; mineral foods are air, water, and salt, and represent the three states in their order.

Animal foods are liquid and solid, as milk and meat. Vegetable foods are liquid and solid, as liquors and wheat. Practically these lines all run into each other. The remarks are aimed at the average Americans of civilized life, who use the function of voice in all its stages of development by culture. The subject is a very important one, as by the voice in speech, song, and whisper, man conveys ideas and confers much happiness, usefulness, or the opposite, which acts make up a large part of life and influence, directly affecting character and reputation.

AERIAL FOOD.

Some may think that this is very rare, for no one is seen to feed on gases, and they are not down in the bills of fare at eating houses. But air is a mixture of gases, and is a food because its O endosmoses into the lungs to form an essential, integral and normal part of arterial blood, which is a tissue, and as necessary to life as muscle, nerve, or bone. The idea that air is food is more than 3000 years old, and is found in the Sanscrit.

Voice is an integral part of our bodies. It is a thing, though imponderable, invisible, but audible. Its different tones have names and signs whereby they are communicated in universal language all over the world. For example the song "Home Sweet Home" has a notation which can be read by English, French, Japanese, etc., when the voice languages could not be understood. No air means no voice.

Again: as our bodies are calculated to exist under the pressure of air, fourteen pounds to the square inch, unless this uniformity of pressure is kept up the voice does not work well. Sounds indeed may be produced with the vocal bands

but they are not the natural voice. When the pressure is reduced blood may escape into the laryngeal tissues as it does through the skin under a cupping glass and the mechanical changes would interfere with phonotation or song. Good voice needs normal air pressure.

Again; bad quality of air is not wholesome for the voice. Why are the great summer travels and resorts to mountain and ocean air but to get air in its purity, moistened with the vapor that comes from the greatest distilleries of the world (the vast oceans), vivified with ozone from the ceaseless beatings of the waves and billows against the wind, each other and the littoral limits? The gigantic evaporation cools the air by withdrawing heat to allow the water to turn into vapor and the wetness of the ocean removes more or less completely the foreign bodies as they fall from the atmosphere by retaining them, while on land the wind continually raises them again and carries them hundreds of miles as dust. Thus we get a well ozonized, fresh, pure, washed air food which strengthens the voice as well as the whole body, as all know. On the mountain the process of purifying the air food occurs by the forests taking in CO_2 and pouring forth O, in the washing of the air by clouds, rain and snow from watery vapors distilled from the oceans, lakes and forests. Provided the atmosphere is not too light the voice is strengthened clearer and fresher in pure mountain air than in the thick, hot, dusty air of the plains. So long as thousands of the human race migrate to have health restored by pure air—so long as whole states feel the impulse of commercial life over summer and winter travel chiefly to get a change of pure air, it is useless to insist on this part of the subject. It and the travel go without saying.

On the other hand, in the heavy autumnal fogs of London, for example, where concert rooms are hazy, the efforts of vocalists are not so successful as when the air is fresh and clear, notably at the Gloucester, Eng., Musical Festival, 1889. I personally observed this.

Late physiologists have found that air which irritates the nose also contracts the lung air passages and thus the supply of air is curtailed. This may cause a depression of the nerve force and hence reacts on the voice which is best produced under normal innervation derived from plenty of good air food. The air of ocean or mountain is unirritating and thus more freely inhaled. It adds to the vitality and voice of the plain dweller in the habit of inhaling dust, fogs and impure gases.

NITROGENOUS FOOD IN AIR.

From the abundance of N. in the atmosphere it would naturally seem that the supply of nitrogenous food should come hence. Although all scientists decided that this is not so, still I feel convinced that the time is coming when there will be light shed on this subject. Possibly at the moment the idea prevails that *air is food* and *N. is the largest constituent of that food.* Agricultural scientists show how plants get their N. from the atmosphere by the action of bacteria. Certainly if the science of bacteriology is founded on truth there are more bacteria found on man than on plants and it would be well to see if they do not appropriate N. for man as they do for plants. Why may not the ammonia of the blood come from the air? Here is a rich field for exploration.

Air is a mineral food. Some aver that minerals are deleterious for human use and the assertion is made of certain medicines "that being entirely without minerals they are harmless taken in any quantity." When we think how that air, water and common salt are minerals, the fallacy of such statements is manifestly plain.

In this view of air as voice food, all the expenses incurred for ventilation are more than warranted, and all those who use the voice for public service are entitled to fresh air food, which they don't always get. For this purpose audience rooms should be ventilated by opening all the means of air egress immediately after the audience has retired, in place of closing them, and ventilate six days later, as is too often done. That is, to ventilate on the Sabbath, in place of preceding Saturdays. Thus the vitiated air has no time to convey its impurities to the plastering and furniture. To replenish a reservoir of foul water, it is better to wash out all at once, than to let a small stream to

dribble in. This principle applies to sick rooms. I have thus found restored voice to follow this quick and complete ventilation, and useful to the sick in critical cases, to protect whom, simply cover up patient warmly and throw a light shawl or veil over the head during the airing.

KEY NOTE OF AUDITORIUM.

The late ex-President Hayes, it is said, could be heard in the largest public halls, as he used to pitch his voice properly, *i. e.*, in the key note of the auditorium. Indeed, this ability was thought be a great factor in making him President. Now as a man eats air food as he speaks and sings; as air in an auditorium vibrates best in the keynote of the hall; as it is easier for him to speak and to be heard and thus accomplishes best the end of voice work; the reference here is not so much out of place as it might seem.

FILTERING AIR FOOD.

If you wet the tip of your finger, climb up and put it on top of some article of furniture, in no matter how clean an average living room, at once the tip will be covered with dirt, or, if you please, with the morphology specimen of the air. Place this under the microscope and you will find a collection of various objects which have, though wingless, mounted up from the floor and other objects on floor to several feet higher than your head? The abundance of this collection has suggested to some the idea of filtering the air as we do water. Prof. Paulus F. Resch, of Erlangen, suggests cotton through which the air may be drawn, and thus separate most of the dust which annoys. I wished for such an arrangement at St. James's Hall, London, where the singers were husky from fog and dust.

LIQUID FOOD.

Water enters into all drinks, *i. e.*, the animal food,. milk and the vegetable foods, juices, infusions, decoctions, all kinds of fermented distilled liquors, beverages, which are mineral and vegetable. The common "coffee" is mineral, vegetable and animal. So are teas. Claimants that minerals are poisons without qualification give themselves away when they use drinks.

WATER.

Distilled water, aerated by falling four or more inches in the spheroidal condition in air as it leaves the still (as the writer has found by trial) is fine physiological food for the voice as it introduces no salts into the system and thus is more efficient to dissolve out the gravel or crystalline matters found in gout, rheumatism and other gravelly diseases. It has a lively and piquant taste like the purest spring waters, refreshes and invigorates the soundness of the body, thus helping the voice. Pure fresh water freely drank is the best remedy for pharyngitis sicca, or dry catarrh of the throat, which is deemed incurable. It comes mostly from a lack of water in the system; and a dry throat is the bane of voice culture.

A plenty of hot water regularly drank will often prevent and cure "colds," the common bane of voices. The hot water will cause peristalsis downwards, wash out the alimentary canal, remove fermenting food which produces intestinal and stomachic gases in excess and which in their turn paralyze more or less the mucous membranes of the air passages, causing more than anything else common catarrhs and colds. Hot water contracts the distended muscular tissues of the alimentary canal, thereby often expelling the gases which have caused the distention. Often patients will say that the hot water makes gas when it merely routs out gas already formed and retained by its own paralyzing power. Water also thins the blood, makes the circulation and nutrition easier in the capillaries, where there is only 1-48,oooth inch spare room for the average red blood corpuscle to pass!!

When the blood properly circulates the voice nerve centres, *i. e.*, the ears and throat will have force to produce phonation and canation. Without the ears the voice is a failure, as seen in "tone deafness," and in the deaf who have normal vocal organs but cannot hear to use them—though thanks to lip culture science some deaf mutes are taught to speak as an exception. Besides, the nerves directly act in the

production of voice by contracting the muscles of the larynx so that the vocal band, the breath bands and the arytenoid cartilages have the right tension to produce the varying tones of speech and song at the will of the performer. Pure water does more to give good nerve force with which to produce vocal results than almost any liquid known, in my opinion.

MINERAL WATERS.

This is a misnomer, as all waters are mineral, but the term is used even by the sages in the profession to denote natural waters more or less charged with mineral salts, from ocean water to Poland spring. These waters are formed by rain distilled from the oceans soaking into the earth, and taking with them all the salts they can find and dissolve, emerge in springs scattered all over our land with bountiful profusion. A complete list of such springs would fill a large volume. People resort to mineral waters as a medicine and attribute their cure to the particular salts found in those waters, regardless of the fact that the rest, change of air food, scene, amusements, etc., save up force so that nature cures, as she will ever do if she has a chance and time enough. Except where it is specially advised, the writer thinks that the average vocalist in ordinary health will do better on the pure spring or distilled waters inasmuch as, generally, people have too much saline of the wrong kind in their bodies from too much feeding on paralyzing vegetable foods.

WATERS IMPREGNATED WITH GAS.

The most common gas is carbonic acid, which is the basis of soda waters and of all effervescing liquors used as foods. It is the common gas formed from food fermenting in the alimentary canal. It tastes good, hence it is deemed indispensible to the outfit of a first-class banquet or meal. It is popular. It would make things very smooth and nice to approve of carbonic acid drinks for the voice, but it would be contrary to the truth. Carbonic acid gas is one of the quickest poisons known when inhaled, as shown in the "grotto del cano" at Naples, where the dog falls quickly insensible at the feet of the guide, since the gas does not rise more than a foot or two. If people inhaled as much gas as they drink in soda water, it is probable they would fall immediately insensible like the dog aforesaid. Some think the lethal influence of ether and chloroform to be partly due to the retention of carbonic acid gas in the air passages. The dentist's forced anæsthesia by breathing as rapidly as possible for five minutes may be perhaps explained by the retention of this gas in the lungs. Certainly deaths by choking may be thus explained. So that carbonic acid gas is an agent of great power. If to bowels already distended with this gas one adds more, the mechanical distension must be increased and interfere with the voice by obstructing the descent of the diaphragm.

Besides this, there is the indirect paresis of the throat as seen when one eats wholly or freely of indigestible food like oatmeal, fit only for horses and tough Scots. I remember one such case in a professional singer. His whole throat was livid like lead, in my opinion paralyzed by the gases which came from the difficultly digesting and hence fermenting oatmeal. His throat poured forth copious catarrhal discharges from its paralyzed mucous membranes.

(*To be continued.*)

A CHALDEAN INCANTATION AGAINST FEVER AND PLAGUE.

[Translated from the French of M. Jules Oppert, member of the Institute and Professor of Assyriology in the College of France. The bracketed enclosures are by the translator, J. Wylie Williams.]

The burning fever, of which the clutch most fatal is,
It is the hostile demon, o'er the stagnant waters brooding.
The plague which pleases the god Bel-El [Mul-lil],
It is the progeny of the infernal goddess (Allat) [Nin-lil].
In the sky above they float, below they cast a snare.
The products of the tombs these evils are!
The healthy strangle they, the weak they paralyze.
The wind of the bile of the gods are they!
Whilst the rainy season 'dures, down from the sky
They fall, launched by the gods, and volatile
They swarm in the city, and suffocation cause.
The residuum of the pluvial waters, offspring
Of the earthly fogs are they!
From house to house they pass;
E'en into dwellings high and spacious,
And make them, like sponges, damp and wet.
No door can keep them out,
Nor bolt their entrance hinder,
Through the windows blow they like the wind,

Under the doors like serpents wriggle,
The wife from the husband's arm they tear,
The child from the father's knee.
They cause the hero to be carried from his house.
They are the curse of misfortune,
At mankind's heels pursuing close.
O guardian god! who watches the gate of mortal man,
Whom his god protects every hair,
Protect him also against the *lamastu*[1],
The *labasu*[2], the *abharu*, the bayadere,
Also against (the curse of) the encient woman,
Against (the evil eye of) the mourners of the dead,
Against the man and the woman,
Against the malevolent spirit,
Against an infested region,
Against an evil locality,
Against the day of darkness in—— ——,
Also when he wishes to enter in—— ——,
Also when in the famine he lacks of bread,
Also when in the battle he is athirst and lacks of drink,
Also e'en when vermin gnaw him he should wish to scratch,
Or during the freshets he would like to sit him down.
Fever, impelled by the Anunna[3], I conjure thee!
Fever, impelled by the Anunna, I conjure thee!
Fever, injuring the patient thou, I seize thee.
The fever, spirit of heaven [Ana?], spirit of earth remember it!
Spirit of Hea[4], lord of the abyss, remember it!
Spirit of Allat, sovereigness of [Scheol[5]], remember it!
Spirit of the lord of fire [Gibil] remember it!
Spirit of the sovereigness of fire, remember it!
Spirit of the lord of rebellions, remember it!
Spirit of the sovereigness of rebellions, remember it!
Spirit of the lord sovereign of *Dazarma*, remember it!
Spirit of the sovereigness of *Dazarma*, remember it!
Spirit of the lord of the holy mountain, remember it!
Spirit of the sovereigness of the holy mountain, remember it!
Spirit of the lord of eternal life, remember it!
Spirit of the sovereigness of eternal life, remember it!
Spirit of the lord of the hundred benefits, remember it!
Spirit of the sovereigness of the hundred benefits remember it!
Spirit of the lord [Nin?], father and mother of the god Bel, remember it!
Spirit of Sin (Lunus), whose ark *Samsu*
Traverses the (milky-way), remember it!
Spirit of Samas (Soliel), the master, the judge of the gods, remember it!
Spirit of Istar, who never the words of the Anunna Disobeys, remember it!
Spirit of [Lakhmi],[6] mother of Kia, remember it!
Spirit of the goddess of Nineveh [Nina], daughter of Hea, remember it!
Spirit of the planet Venus [Istar *i. e.* Nana], who directs the *utullat*, remember it!
Spirit of the god Isbil, the vicar of the — — — on the earth, remember it!
Spirit of the sovereigness *Izzida*, who makes the earth to quake, remember it!
Spirit of the seven gates of the world, remember it!
Spirit of the seven bolts of the world, remember it!
Spirit of the god Lil-gab,[7] porter of the world, remember it!
Spirit of the goddess [Allat], ambusher of joy, spouse of Namtar,[8] remember it!
Spirit of Kan-din of the holy land, daughter of the abyss, remember it!
The mortal man, son of his god,
That I may save and raise!
That he can be able to eat and drink!
That he speed surely over the bridge which carries over the waters of the — — — of Bel!
That the water of the Ocean, the water of the lake, the water of the Tigris, the water of the Euphrates,
The water of the marsh, the water of the rivers retire!
That the light reappear in the heaven,
That the drouth disappear from the earth,
That the man, son of his god, may be touched (by him, that (his health?) return to him.

1. The *lamastu* is probably the *lamassu* or divine bull.
2. The *labasu*, probably the iltebu, or pursuing dog, which Sayce believes "may be derived from *lahbu*, to be violent." This dog personifies originally, it is thought, the devastating wind.
3. Anuna are the (seven?) earth-spirits who guard the waters of life in scheol from the use of the dead.
4. "Spirit of Hea," etc. It is to be remarked that the spirit is invoked, not the deity directly. The deities are considered as distinct from their spirit, Ka, double, name, or shadow. The same principle applied also to trees, stones, etc.
5. Scheol is the Hebrew for the Assyrian Su-alu. The original title of the place or city of the dead is the Sumerian Uru-gal.
6. Lakhamu seems to be the feminine deity, and Lakhmu the masculine counterpart. But in the Hindoo, Lakshmi is the mother of Kama-deva, the first word of which compound resembles the Kia of the incantation.
7. Probably Gibil god of fire, *i. e.*, the fire stick.
8. Namtar, the god of plagues.

[This incantation was translated by Oppert, partly from the original Accadjan and Sumerian and partly from the Assyrian translation. The latter was made about 1500 B. C., according to Sayce; the Accadian being then a dead language. As the Accadian sovereignty had ceased with the accession of Sargon (B. C., 3800), it is probable that the litanies from which this incantation is taken antedate that period. We have then, in this a specimen of the medical thought and practice of more than 6000 years ago, It will be interesting to note the remarkably vivid description of the invasion of a house by malaria; and the connection of febrile attacks with stagnant waters.—W. F. W.]

N. B.—The bracketed enclosures, and also the foot-notes are to be considered as tentatives by the translator.

THE GOVERNMENT OF VENEZUELA AND THE PAN-AMERICAN MEDICAL CONGRESS.—Señor P. Ezequiel Rojas, the Venezuelan Minister of Foreign Affairs, has forwarded on behalf of his government, through the U. S. *Chargé d' Affaires*, at Caracas, a formal acceptance of the invitation issued pursuant to the joint resolution of the United States Congress to the various governments of the Western Hemisphere to send official delegates to the Pan-American Medical Congress. The selection of delegates has not yet been made, but the names will be forwarded at the earliest possible moment.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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SUBSTITUTION REMEDIED.

THERE is not much said about substitution nowadays, nor about the relations of physicians and pharmacists. In fact, we hear nothing about the burning questions of a few years ago. No physician of our acquaintance is bothering his head about the druggist's prescribing, or refilling prescriptions without permission. Without any fuss, combination or agreement, matters have quietly regulated themselves. The physicians who found their incomes hurt by pharmaceutical competition have simply stocked their offices with the drugs they prefer to use and dropped the habit of prescription writing. Many advantages have been realized thereby. The patient is held more closely; he is brought back when the doctor wants him; and if he is benefited, he recommends the doctor, and not the medicine, to his neighbor. The doctor finds a degree of precision possible that he never attained before, as he learns to know his drugs as no one can unless he handles them personally. He knows the strength of the aconite he is using, and does not have to run his chances of getting good, bad, or indifferent, according to the pharmacy his patient happens to enter. We often think in this connection, of Ruskin's advice to artists, to prepare their own colors.

The system is very popular with the patients, who appreciate the advantage of having no drug bill, and who have greater confidence in medicines dispensed by the physician. This enables the latter to exact prompt payment of fees, also, as people appreciate the necessity of money to keep up a stock of drugs. The preparation of pills, triturates and dosimetric granules, with the numerous ready-made prescriptions, have greatly facilitated this revolution; as enabling the physician to dispense his drugs without the trouble of compounding. It is significant that the old, galenical preparations have disappeared from the advertising pages of medical journals, and have been replaced by those just mentioned. Things that sell are advertised; and at present the dosimetric granules and coated pills have decidedly the preference.

Another effect of the druggists' incursion into the physician's realm is seen in the increasing number of young medical men who commence their active practice by opening pharmacies. The advantages to the beginner are so obvious that it is a wonder that the vast majority do not adopt this method. Customers can always be attracted to a pharmacy; acquaintances made over minor ailments lead to employment for graver ones; and the result is a rapid progress over this trying period of the physician's career.

The result appears to be a gradual fusion of the two professions; the pharmacists becoming physicians and physi-

cians pharmacists, so that in a few years the ancient condition of things will be restored; and the provision of the code of ethics prohibiting physicians being interested in the sale of drugs, will have to be rescinded.

There are many things that cannot be dispensed by the physicians, however; and of these, two cases of substitution recently came under our notice. An English firm has obtained a reputation, and has created a demand, for a certain variety of soap; whether due to intrinsic merit or to the liberal use of printer's ink is immaterial. This soap is put up in cakes of peculiar shape, wrapped in paper covers whose quality, printing and ink are sufficiently peculiar to distinguish it at a glance as a foreign article. We picked up a cake of soap in a drug store the other day that we took to be this English make; but on close examination found the name of a local maker instead. In all other respects, the package was a perfect imitation of the foreign product; and very few persons would notice the difference in the makers' names.

Quite often, when ordering Platt's chlorides as a disinfectant, we have found the bottles dispensed resembling in all respects the genuine, but instead of Platt's it was Smith's, Jones' or Robinson's Chlorides. Now, there is no objection in the world to S., J. or R. putting their chlorides on the market if they please; or to any one making as good a soap as Pears, if he could; but when these people imitate the packages of standard articles, they do so with intent to deceive. They simply acknowledge themselves to be dishonest enough to mislead purchasers into buying their wares when they think they are getting others. It is doubtless cheaper to avail themselves of another's good reputation rather than to earn one by making good preparations; but when any one thus openly acknowledges his willingness to perpetrate such petty rascalities, it should be a warning to customers to shun him altogether.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,
TIMES AND REGISTER,
1725 ARCH STREET, - Philadelphia, Pa.

TYPHOID FEVER: A FATAL CASE.

PERMIT me to describe a case of typhoid fever to you and to ask your opinion.

Katie L., aged 19 years, has always enjoyed good health and has a good family history. On January 26th she showed unmistakable evidences of typhoid fever. Her pulse was 110, temperature 104° F., her tongue was heavily coated and red on the edges; she had some diarrhœa, abdomen tympanitic and marked gurgling in the right iliac fossa. Her skin was hot and dry.

I put her on the sulpho-carbolate of zinc (three grains every three hours, and a milk diet.

She ran along with a morning temperature of 103° F., rising in the evening to 104°, and a pulse gradually increasing in the rapidity and feebleness of the beat until February 5th, when she died. She had some delirium February 1st, which gradually increased until she died. There was no hemorrhage from the bowels, no perforation and no peritonitis.

I state this case thus briefly for the reason that it has almost shaken my faith in the sulpho-carbolate of zinc treatment.

I have treated about ten cases with the medicine as suggested by you, and had come to regard it as nearly specific as it is possible to get anything.

I want to say further that the medicine was continued during the whole

course of the sickness, and in the eleven days she took nearly four drams of the medicine. D. C. H.

[The zinc should have been increased to five grains every two hours; and if the fever remained as high, cold baths employed. In such a case the milk diet is insufficient. Raw white of egg, predigested milk, raw beef or oysters grated and digested, Bovinine, and, if necessary, wine, ale or brandy should have been employed to keep up the strength. These are as essential as the intestinal antiseptic. Had this been impure or given in too large doses there would have been gastric irritation; while the high fever, without any local complication capable of causing it, such as pneumonia, shows that the intestinal antisepsis was not complete.—W. F. W.]

ABNORMAL SLEEP.

I WISH to descibe a case to you for your opinion as to prognosis, treatment, etc. The man is a German, aged 36 years, weighs 200 pounds, well nourished, very intelligent, and to all appearance in perfect health. He is married, has two children and his sexual appetite is rather strong. Three years ago he had la grippe, and since then he has had attacks of "sleepiness" or somnus, when he will sleep day and night for several days at a time. It often requires rough handling to waken him. His wife thinks he is growing worse. He complains of pains in the hips and in the pit of his stomach, and says that "he gets so tired he cannot keep awake." He has often been found asleep in the field beside the plow. His relatives believe that his intellect is becoming impaired. Now, if you or some one of the staff of the TIMES AND REGISTER will give me your best opinion of this case I shall be obliged. J. VAN VLIET, M.D.

WHEATON, KAN.

[Narcolepsy, though relatively rare, should be more often discussed than it is in medical literature. The "sleeping sickness of the Africans" has been mentioned as occurring endemically among some tribes. The "Fat Boy" in Dickens' Pickwick affords an instance of the milder form, and occasional newspaper mentions would lead to the belief that it is not so rare a disorder as supposed. Usually the sleep periods increase and become longer until during a greatly prolonged sleep death occurs. Some vascular interference in the brain is at the root of the ailment, such as could be induced by general or local nutritional failure, or destruction of cerebral tissue itself may cause it. Tumors, atheroma, extravasations may originate it. The cause should be sought in some possible constitutional taint and treated accordingly. Post-mortem might reveal massive tubercle, gumma, sarcoma, arterio-sclerosis, or nothing definite beyond a slight cerebral pallor. As for treatment, potassium iodide or cod liver oil, if luetic or tuberculous, and keeping up the strength with strychnine tonics might be justified. Examination of the heart may also justify the use of digitalis or nitro-glycerine; and, to awaken the patient occasionally we may employ inhalations of nitrite of amyl.—S. V. C.]

RETROVERSION OF UTERUS. CATARRHAL JAUNDICE.

PLEASE give me the best treatment you think can be used by a country physician for retroversion of the uterus of long standing but with no adhesions. Also, jaundice with catarrh of the bile ducts, and probably gall stones, with considerable enlargement of the liver and great tenderness of same, which has resisted all treatment for eight weeks.

C. C. G., M.D.

[Put the woman in bed for a week. Insert tampons of wool, soaked with pure glycerine, in the vaginal *cul-de-sac* behind the uterus, changing twice a day. Then replace the uterus, if necessary (the tampons usually do this), and insert a wool tampon covered with tannic acid ointment; applied each morning and suffered to remain until night, unless it causes pain, when it should be removed. In many cases no other remedial measure is needed, and in a few weeks the tampons can be lessened in size, and finally discontinued. As to the jaundice, catarrh and probable calculi, I would suggest the succinate of soda, gr. v. thrice daily, with cold water enemas daily, capsicum plaster to the hepatic region, and an occasional dose of pilocarpine. Diet carefully regulated, avoiding fat, sugar, pastry, hot cakes, pork, veal, cheese, beans, peas, nuts, ices and ice water. Malt extract and pepsin should be given at each meal.—ED. T. & R.]

STRYCHNINE HABIT, CIRRHOTIC KIDNEY, OR CARDIAC ATROPHY.

I HAVE been excessively sensitive to cold for twenty-five years, gradually growing worse, until now with a temperature at 40°, I doubt if I could put on clothing enough to keep warm, while at rest. Eight months ago, I noticed a swelling of my ankles above the shoes, towards night. My lips had been purple and my nails blue for a long time. A friend in whom I have confidence found my heart perfectly normal, though my arterial tension was very high and my digestion somewhat impaired.

I concluded to take nux, exercise, cold baths, and a diet largely of meat, I

began the nux in doses of ten minims thrice daily and gradually increased to 100 minims, in five months. The swelling of the feet disappeared during the second week ; and, although still very sensitive to cold, I think I am a very little better, although my lips and nails are still colored. My lung expansion is good (five inches), I eat and sleep fairly well, and if it were not for the cold I would not complain of my health.

My urine has for years contained, two to five hours after passing, a semi-transparent down-like deposit, light, does not fall flat to the bottom of the graduate, but floats in the lower fifth of the urine. Liquor potassa and caustic soda do not affect it. Nitric acid dissolves it, to reappear a little heavier later. Heat readily dissolves it. I have thought it amorphous urates; but its persistence is strange. The specific gravity is 1020 now, with exercise ; the color a greenish amber ; feebly acid at noon.

W. H. T.

[High arterial tension indicates cirrhotic nephritis, and the remedy is nitro-glycerine. Is this symptom surely present, when not taking nux? Leave out the tension, and we have a picture of feeble heart action, from atrophy or degeneration of the cardiac muscle. High feeding of highly nutritious foods in small bulk, with wine in moderation, and very little fluid of any sort, with spartein or strophanthus, would seem to be indicated.—Ed. T. & R.]

SYPHILIS.

WILL you please give me the best treatment for a case of syphilis, contracted four years ago? The patient has been treated with iodide potassium, bichloride of mercury, and comp. alterative extract (S. & D.), for some time, and seems now to enjoy very good health, except for pains in his head and joints. The bones seem tender about the joints and on top of the head. Would it be necessary to restrict his diet?

I would be glad to know if there is any treatment that would give him a radical cure.

He is a single man, and wants to marry in a year. Will it show in his offspring? JAMES GREEN, M.D.

BRIDGEWATER, N. C.

[Unless the disease is thoroughly eradicated, it will reappear in his children, if any come to the light alive. For treatment, see TIMES AND REGISTER, of November 19, 1892, where the subject is discussed at length.—Ed. T. & R.]

SURGICAL INSTRUMENTS AND THEIR CARE.

YOU invite subscribers to solicit such information from you as they wish, so I come to you with this query: Is there published any work devoted especially to "Surgical Instruments" (what are actually necessary in general surgical work, and what not; how to select them, how best to cleanse and care for them, etc., etc.), other than the general dealers' catalogues? If there be any such, refer me to the best one; if not, refer me to the surgical work that best describes what I have named.

G. H. KIRWAN, M. D.

[Gerster's Aseptic Surgery probably comes nearer what is wanted. Such a work as Dr. Kirwan suggests appears to be needed.—Ed. T. & R.]

MULTIPLE NEURITIS.

THE following case has perplexed me not a little: G. S., aged 55 years, teamster, of average morals ; noticed last September that his hands were getting numb. He could not tell whether he had the lines and whip in his hands, or only the whip.

His hands would get very cold. He continued to work.

This failure in the sensory nerves extended up the arms, the left being the worst.

In October his feet became affected like his hands ; so that he walked with difficulty. Since then the palsy has crept up his body, and he is now numb all over ; his jaws being the last part affected. He can detect but one point, when pricked by two points four inches apart. In November his urine was scanty, high colored, s. g. 1024, with no albumen, but a trace of sugar. He lost flesh rapidly, and the end seemed near. December 1, his urine was normal, he could walk around the house, his appetite was good, his bowels moving every day. He is still losing flesh. There is a little soreness at the cardiac orifice of the stomach, his tongue is red and fissured. He does not sit or lie long in any one position. He says if he did he could not move at all.

When first taken he felt a pain at the back of the neck, still present with a tendency to fall forward. Several times his limbs and arms have broken out with large red blebs, which itch intolerably, but disappear in less than a half hour. The treatment has been by tonics; strychnine, nux, arsenic, celery co., tr. avena sativa, bismuth and pepsin, with electricity all the time. What is it? and what can I do for him?

F. L. GAGE, M. D.

BERKSHIRE, OHIO.

[The symptoms given point clearly to the existence of Multiple Neuritis—a disease sufficiently rare to make reports of individual cases of interest. To render the diagnosis certain, however, the existence of the Reaction of Degeneration should be demonstrated in some of the muscles that have been weakened by the affection. The disease is a curable one, though but little can be done with drugs. Galvanic electricity applied by means of large electrodes to the peripheral nerves affected, massage, limited exercise, etc., offer the best hope of success; and when systematically and properly applied good results may be looked for in a few weeks. —G. BETTON MASSEY.]

TYPHOID FEVER: FATAL CASE.

IN regard to my fatal case of typhoid fever, I will state that I used white of egg, raw, in addition to milk, and supporting measures, whisky, etc., together with sponge baths. With all my efforts the case proved fatal.

I wish to state here that a brother of the young lady, aged seventeen years, was siezed by the same fever, on February 7th, with a temperature of 105° F. and a pulse of 110. I am glad to say that today his pulse and temperature are both normal, and he wants his diet increased. He has taken nothing but the zinc treatment.

I have another case in a different locality, who has made a change for the better under the same treatment, in seven days.

D. C. H.

[It is too much to expect that every case will recover, even under the best methods of treatment, and when directed by the best medical skill. Constitutional peculiarities, that intangible but most real something we denominate vital force, local hygienic conditions, the mental state, all influence the result to a large extent. And after allowing for all these elements, there is still an unresolved remainder of cases whose fatal ending is inexplicible to us, even when an autopsy has been made. In fact, we may well ask, when is our prognosis anything but an approximation, a mere guess at the probabilities?—ED. T. & R.]

SEPTICEMIA FOLLOWING ABORTION.

I RECENTLY saw the case of a lady who had aborted. When I first saw her, only a few hours previous to her death, she was comatose, could swallow only with difficulty, even as to liquids. She complained mainly of pain in the head, had high fever at times, alternating with chilly sensations. There was tympanites. She had been troubled with leucorrhœa previous to this illness, and was in poor health. I was not with her at the start, and the physician who preceded me had given up the case as hopeless. She appeared to be in pain, was restless, and moaned. The pulse could not be found at the wrist, long before she died. Her illness lasted only a few days. I wish you would give your diagnosis of this case, and the treatment you would suggest. I am well pleased with the TIMES AND REGISTER.

Z. N. MILLARD, M.D.

THACKERY, ILL.

[Septicemia from retention in the uterus of decomposing products of conception. The treatment of such cases is to empty the uterus, by antiseptic injections, curette or placenta forceps; keep up the strength with easily digested, highly nutritious food, and give quinine and antipyrin for the fever; with such sustaining measures as can be employed, and local sedatives to the abdomen, such as hot flannels.—ED. T. & R.]

IRRITABLE BLADDER OF THE AGED.

PLEASE advise me as to the treatment for the irritable bladder of old people. I have a patient, a lady aged 72 years, who is unable to sleep over one hour at night, owing to frequent urination. I have given belladonna, hyoscyamus, and corn silk, but all have failed.

[The urine may be too acid, or loaded with salts. An examination will show this and indicate the remedy Or, there may be ulcer or caruncle of the urethra If not, try salol, gr., v. four times a day, saw palmetto, or nitric acid, in succession. The last is specially effective when the urine is pale and acid.—ED. T. & R.]

DYSMENORRHŒA.

PLEASE advise me as to the following case: A girl, aged 18 years, unmarried, has always had much trouble at her menstrual epochs; *great pains*, scanty flow, and continual vomiting. She sometimes skips a month, but does not miss the

pains, etc. I have seen the case to-day for the first time. The uterus is hard and the size of a child's head, the os uteri very far towards the sacrum. Her mother says that the girl's stomach (?) has been hard for a long time. Diagnosis:—Retained menses in consequence of constriction of the uterine canal. Is this correct, and if so, what is the best treatment? Will dilatation with a laminaria tent do, or would forcible and rapid dilatation with a proper instrument be better? After dilatation, what is the best means to evacuate the clots, or will they pass off themselves, if uterine action be secured with ergot, etc.? J. K. L.

[It looks as if the girl were pregnant. At any rate it would be wiser not to do anything that would do harm if this were so, but give phenacetine, viburnum or aletris in full doses until the present period is over. Then, if there is no pregnancy, wait until just before the next menstruation and dilate the os with tupelo or elm. Laminaria and the dilator are too violent. Do this for a few months, and use the remedies suggested, and the pains will gradually lessen until they cease altogether.—ED. T. & R.]

NEURALGIA.—PRURITUS.

I FIND the special numbers of the TIMES AND REGISTER very instructive and read them with great care. The Bureau of Information is a very important addition to the otherwise excellent make-up of this journal.

I would suggest a special number upon neuralgia, and especially upon the intercostal variety. I believe that neuralgia is not a disease of itself, but a symptom; still we often meet with this condition and it is not only hard to explain it to the patient, but also to our own minds, or to determine the proper treatment for its relief.

I have a case concerning which I wish to ask you to give your opinion upon and to suggest the proper treatment.

The patient is a minister and has a papular eruption of the skin, in patches of an irregular shape. It is accompanied with intense pruritus and is slightly inflamed and elevated around the hair follicles. It is located upon his feet, and is slowly extending itself upwards on his limbs. At present, however, it has only reached a few inches above his shoe tops. It never troubles him on the soles of his feet nor during the winter except when the weather is very warm for a few days. But in the spring when it becomes warm, the eruption comes on and lasts until cold weather in the fall, being most severe in the very warm weather of summer.

The main complaint is of the intense itching. The patient has good health, a very robust constitution, and has no ailments outside of this trouble. He eats but little meat, or animal food, depending mostly on a vegetable diet. This trouble came on some five or six years ago. It first appeared when he attended the annual conference of his church. He put on a new pair of shoes, and, a day or two later, this trouble began; and by the time he returned home he was suffering a good deal from the itching. He applied to his physician for treatment, while he was in Colorado, but received no benefit. Through the advice of different physicians, he has used salicylic acid, carbolic acid, and oxide of zinc ointment, with no benefit. One physician thinks it is dependent upon a neurotic condition, and gave Fowler's solution. My theory has been that it is a parasitic, or rather a fungoid, condition, which is dependent upon some micro-organism; and I have used corrosive sublimate, a grain to the ounce of fl. ext. of benzoin comp., as an application; and, while it is used, the symptoms are completely under control, but return in a short time. I have thought to increase the corrosive sublimate until it occasions slight inflammatory reaction, but not to blister, unless no other means will control it, and to persist in this treatment until the affection shows no disposition to return. I have so far failed to impress the patient with the importance of this action and his treatment; so the patient has requested me to ask your advice on his case.

GOULD SMITH, M.D.

TAYLORVILLE, ILL.

[If there is infiltration of the skin, apply lint soaked in pure glycerine, and covered with oiled silk renewed thrice daily, until the infiltration has disappeared. Then apply an ointment of biniodide of mercury, twenty grains to the ounce of petrolatum, or as near that strength as the patient will stand. After the eruption has healed, apply an ointment of benzoic acid in lard, half a drachm to the ounce, every night and morning for at least a month. Regulate the digestion, examine the urine, look to the diet, and have the man take frequent baths with sulphur, sanitas, or tar soap. Also soak the clothes well in a disinfectant solution.—ED. T. & R.]

SALOL FOR CYSTITIS.

I HAVE now taken four ounces of salol, at the rate of forty grains a day for twelve days, then omitting it for a week. For fermentation in the stomach, I have found salicylate of soda, taken just after meals, of value. My bladder is considerably improved. I now rise about three times nightly, whereas I used to be aroused to urinate from six to ten times. I find that the hot rectal enemas have also a good effect on the bladder, as I rest easier the night after using the enema. The rectal catarrh does not improve. The bowels are constipated, never moving without aid. Riding or driving twenty-five miles hurts me very much, causing fever and nervousness, and giving very high color to the urine. It also causes tenderness in the back of the neck. The dyspepsia is better, appetite tolerably good, stomach still sours some at times.

J. M. R.

[This man has no business to ride or drive anything like twenty-five miles a day. One-tenth of that distance should be his limit. For the rectal catarrh, he should employ some antiseptic, such as Sanitas fluid, in the hot enemas. The effect of this fluid on mucous catarrhs is worth studying.—Ed. T. & R.]

PSORIASIS.

I WOULD like to have your advice in a case of skin trouble —psoriasis— I think. History: When I was about 15 years old, I noticed on my scalp a large amount of dandruff. Four months later, after deep study for an examination, I had two round red spots on my breast, accompanied with great itching. The college physician told me to "break it out with croton oil." Nothing else was done for four years, at which time I was studying medicine; and, without consultation, I applied pure carbolic acid to the two places. No result ensued except two large sores. After graduating, I consulted an eminent dermatologist, and he diagnosed the affection as seborrhœa. I went through all the treatment known for that, and obtained no relief.

When 27 years old I noticed on my thigh a round, whitish spot, and consulted another physician. He made the same diagnosis; but the new treatment gave no relief. At that time, on the back of my hands there was an eruption, very slight, but with intense itching. I applied acetic acid eight or ten times, and cured it up. I then had to keep my face clean shaven, for there the disease made its appearance; then on each side of my nose. I shaved my scalp, and applied acetic acid on all, with no good results. I then commenced using resorcin, 120 grains to eight ounces of bay rum, and had better results than I had had with any former medicine. I have used this for two years on the scalp, with the result of keeping the dandruff from being so abundant, though I cannot go without the lotion for more than three days.

About three months ago, a round, pink, whitish spot appeared on my leg, nearer the ankle than the knee. Then one came directly under the garter, then several on the other leg, then on the arms, then the back and then the thighs, and now I have about 400, from the size of a pin-head to that of a dollar. There are only four or five on the abdomen. *None on the knees or elbows.* I hardly know when one comes except my clothes touch it, and then comes an itching. I apply acetic acid, and get a good sore and this stops the itching for a *short while.* Resorcin does no good. I have for the last six days taken $\frac{1}{30}$ of a grain of sulphide of arsenic, four times daily, and perhaps I may be a little worse, but there is no active inflammation, as from arsenic.

My father's history is good, with the exception of a mild seborrhœa of the scalp, breast and face. My history is good as to any trouble except as I have stated. I am now 34 years old, and my general health is good, except for nervousness. I have no excesses, except in smoking. This is a malarial country, though I am rarely troubled with that. I notice among my patients, especially those that lead an indoor life, seborrhœa of the face or something akin to it; yet I have never been satisfied, or had a typical case.

I have tried to give you every thing that will have any bearing on the case in point, and hope you will help me.

W. D. Turner, M. D.

[Just now I would feel inclined to employ losophan locally, and to push the arsenic until consti-

tutional evidences of its action were manifest. I would also suggest that the same antiseptic precautions be taken as with a case of undoubted parasitic disease; the clothes to be soaked in antiseptic solutions, and the patient bathed daily in water containing sanitas fluid, or thymol. The losophan should be in ointment with lanoline, and should be continued for some time after the disappearance of the eruption.—[Ed. T. & R.]

Book Notices.

The Eclectic Medical Journal Visiting List and Pocket Reference Book. J. M. Scudder & Sons, Cincinnati, Ohio.

Besides the tables ordinarily employed in these lists, this one contains a "table of indications and doses of eclectic remedies." Most of these are questionable; many are evidently of homœopathic derivation, and some are of value; especially as indications for the use of remedies as yet but little known to the mass of the profession.

Brice's Pocket Practice. By Clarence A. Brice, M. D. Leather, 12 mo. pp. 176. Price, $1.00.

A pocket manual for the young practitioner. The author, has not only been an active practitioner, but, as editor of the *Southern Clinic*, has kept the run of the current medical thought as no one but an editor can.

The Chronic Disorders of the Digestive Tubes. By W. W. Van Valzah, A. M., M. D. N. Y., J. H. Vail & Co., 1893. Cloth, 8 vo., pp. 151.

Dr. Van Valzah has made a study of the digestive functions, and his work carries one far beyond the ordinary textbook. He has won a high place as an authority on disorders of the digestive organs, and his book is well worth purchasing and careful reading. It is a book for the practitioner, old or young.

Zymosis and Pathogenesis. A Bacteriological Sketch (2d Section). Part XI. Published by James J. Fellows, N. Y., 48 Vesey street.

In this part are considered the infections, sepsis, fermentations, ptomaines, immunity, etc.

Dr. Dawson's Death.—In the death of Dr. W. W. Dawson, Cincinnati, has lost one of her foremost citizens, one who has brought honor upon the medical profession of his city.

The Medical Digest.

IODIDE OF STRONTIUM IN CARDIAC AND OTHER AFFECTIONS.

THE clinical applications of iodide of strontium has been retarded on account of the extreme difficulty which was first experienced in procuring a chemically pure and at the same time a stable salt.

This problem has been solved by Paraf-Javal. From the investigations reported to the Biological Society, May 28, 1892, it was shown that the action of iodide of strontium on the circulation of animals is similar to that of iodide of potassium.

Practical clinical experience with strontium iodide (Paraf-Javal), has fully confirmed the supposition that the iodide of strontium would present the same advantage over the potassium salt as its bromide analogue, and a series of observations was undertaken by one of us, on account of the non-poisonous character of the salt as compared with potassium iodide.

Observation 1.—A lady *æt.* 50, with chronic endocarditis and feeble heart, suffered considerable dyspnœa together with symptoms of angina pectoris. The patient was treated for some time with iodide of potassium which gave considerable relief, but she was unable to continue its use any longer on account of the gastric-irritation to which it gave rise. The *standard solution of strontium iodide*, (30 grains to the ounce) was therefore substituted, beginning with one tablespoonful, subsequently increased to two tablespoonfuls daily. The change proved eminently satisfactory and within twenty-four hours, a marked improvement in the symptoms was observed and the amelioration was maintained by its continued use.

Observation 2.—A young professor affected with a cardio-pulmonary affection, characterized symptomatically by attacks of depression at times, taking the form of angina pectoris with a state of incomplete syncope. The heart presented signs of chronic endocarditis with a predominant determination on the left side of the auriculo-ventricular orifices,

which is the seat of an *insufficiency* shown by a rude *souffle* subsisting at the left and at the point of normal *bruit*, as well as by a marked systolic tendency of the radial pulsations.

The patient had been benefited by iodide of potassium, but was unable to continue its use, even in small doses of from 15 to 20 grains daily, without gastric derangements, which prevented the proper functions of digestion and alimentation. He was very weak, discouraged, and a prey to attacks of præcordial agony. A tablespoonful of the *standard solution of iodide of strontium* was administered, and increased later to a tablespoonful and a half daily. The effect was most remarkable; and in a few days he was able to resume his occupation, and gradually the functional phenomena to which he was subject disappeared, the nutritive functions improved, and a fair condition of health is now established.

Observation 3.—Our patient is a talented artist, aged 50 years, who has suffered for a long time with an endocarditis, localized on the left side of the heart, and of the auriculo-ventricular orifice with arterio-sclerosis, and a complication with considerable gastric ectasis, and rebellious dyspeptic conditions. He is subject to attacks of depression which recently have become of extreme gravity, and which affect his respiration; causing a loss of consciousness, and a fear of death. Small doses of iodide of potassium had previously helped him, but had to be abandoned. A tablespoonful of iodide of strontium solution was prescribed, and after the third day there was considerable improvement of the cardiac functions, and the dose was increased to two tablespoonfuls daily. This was continued for a month; the attacks of oppression and præcordial agony had disappeared, and there was considerable improvement in nutrition.

Observation 4.—The patient is a powerful man of 40 years old, who is subject to frequent attacks of neuro-muscular rheumatism which manifest themselves on the heart by phenomena of pain, dyspnœa, and præcordial oppression. Auscultation demonstrated a commencement of endocarditis and particularly of the aortic ventricular orifice. The patient had never been submitted to any special treatment for this cardiac complication. Two tablespoonsfuls of *solution iodide of strontium* (Paraf-Javal) were administered, which was perfectly tolerated. Under its influence the dyspnœa and oppression disappeared entirely in the course of two months.

Our conclusions upon these and other observations show that iodide of strontium by its favorable and rapid action in morbid cardiac and cardio-pulmonary troubles, are that this salt is superior and preferable to iodide of potassium, for in no case has any symptom of intolerance such as cephalalgia, coryza, with nasal and salivary hypersecretion, cutaneous eruptions, etc., been noticed.

It is, therefore, permissible, on the physiological and clinical evidence, to consider iodide of strontium as an excellent substitute for the iodide of potassium, with this considerable advantage, that, although the dose is the same as that of the potassium salt, it may be increased when necessary, without having to fear the intolerance which would almost certainly follow larger doses of the latter.

The indications for the use of iodide of strontium are of course those of iodide of potassium, in which are included cardiac and cardio-vascular affections due to arterio-sclerosis; lesions of the myocardium and intra-cardiac orifices, asthma, angina pectoris, and in chronic and muscular rheumatism and gout. It is also indicated in the treatment of that large class of skin affections recognized to be amenable to iodine, also in inflammations of a strumous type.

It may be advantageously employed in inflammatory conditions such as pleurisy, peritonitis, either simple or tuberculous, pericarditis, certain forms of pneumonia and in pulmonary emphysema.

This medicament is clearly indicated moreover in the treatment of enlarged glands, such as the amygdalæ, in mammary hypertrophy and in enlargement of the uterus or prostate.

Iodide of strontium (Paraf-Javal) does not set up gastric irritation or cause palpitation of the heart. It is speedily eliminated by the kidneys, while in its various applications, the special action of the iodide is supplemented by the beneficial effects which strontium has

been proved to exercise on the functions of nutrition.—Laborde & Malboc, *Tribune Med.*

GERMAN NOTES.

TRANSLATED BY DR. AD. MEYER.
CHICAGO, ILL.

ABDOMINAL MASSAGE WITH A CANNON-BALL. (Dr. A. Rose mentions in the *New Yorker Medicinischen Monatsschrift* Prof. Sahli's suggestion for the treatment of chronic constipation).—The patient rolls an iron ball of about three to five pounds on his abdomen for about five to ten minutes every day, perhaps best from the right side (coecum) over the epigastric region to the left side (sigmoid flexure), and also imitates the kneading movement of the masseurs by letting the ball fall from an appropriate height. This is best done before rising in the morning (the ball has to be kept in the bed until it is warm). With a little effort the patient obtains a regular action of the bowels, without the expense of a skilled masseur.—*Ad. M.*

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METHOD FOR INJECTING IODOFORM INTO THE TUBERCULAR HIP-JOINT. DR. O. v. BUENGNER, MARBURG, (*Centralblatt fur Chirurgie* No. 51, 1892.)—Two forms have to be distinguished. In the one, in pure parenchymatous forms, five to ten grammes of an iodoform-glycerine emulsion, twenty per cent. are injected into the the joint every week. Where there is effusion into the joint (abscess), the contents have to be withdrawn by aspiration, and ten to thirty grammes of the emulsion are injected to fill the cavity; this has to be repeated every two to four weeks. B. uses a Pravaz syringe holding ten grammes, with a canula five to seven centimetres long and one millimetre thick. To reach the joint best, B. advises to draw a line from the place where the femoral artery crosses the horizontal branch of the os pubis, to the end of the trochanter major, and to introduce the needle at the internal border of the sartorius muscle right into the joint.—*Ad. M.*

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INFECTION WITH CHOLERA ASIATICA THROUGH FOOD (Dr. H. Kossel, *Deutsche Med. Wochenschrift*).—On August 28, the wife of Mr. F. at Tessin, Mecklenburg, came home from Hamburg where she had called upon her daughter. The woman was kept in quarantine and the luggage was taken for disinfection. In the pockets of her dress she had, however, buttered bread which she had brought from Hamburg. The next day she was allowed to leave the quarantine station as she did not show any sign of disease.

The said butter-bread was taken by the husband and two daughters of the woman. On September 1st, three days after her arrival and two days after she entered the house, the husband, who had had pains in the abdomen on August 31, was taken ill with severe symptoms of Asiatic cholera, of which he died the following night. At the same time the one daughter was taken ill under symptoms of the character of cholera, which caused death on the tenth day. The other daughter was taken ill on September 4, and recovered. The mother and the relatives in Hamburg were not infected.

There were no other cases of cholera at Tessin, neither at nor before nor after that time. The food which Mrs. F. had brought from Hamburg, came from the shop of her father-in-law, who has a grocery at 12 Rutschbahn street. It is very remarkable that in the said street the number of cholera patients increased on the same days when the persons in Tessin were taken ill. This seems to be a good proof for the supposition that cholera-germs can be carried on food by a healthy person.—*Ad. M.*

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ON METHYLEN-BLUE (MERCK) IN MALARIA (By Prof. Dr. Stan. Parenski and Dr. Stephan Blatteis. *Therap. Monatsh.*, I, *1893*).—Quinine is no longer the only specific for malaria. The attempt made by the authors and by Ehrlich and Guttmann to stain the plasmodium malariæ in the blood of the living organism, led to the discovery of the specific action of methylen-blue. The authors had 35 cases; in 33 cases the attack was checked immediately by the remedy; in one a single attack reappeared after a fortnight, and one case was not benefited either by methylen blue—administered through seven days—or by quinine.

The authors administered the drug (Merck's preparation) in capsules of 0.4, 0. 5 (7-8 grains) three times a day, later on, twice a day. The stool is stained blue, and so is the urine for about two days. Sometimes the first dose is thrown up, but the patient gets soon accustomed to the drug. Slight trouble in the micturition is met with the point of a knife full of magnes. carbonicum with the first doses of the drug. There are no unpleasant consequences following the use of the pure preparation. It has to be continued for 20 days.

The authors recommend it where quinine does not act, or where it has contra-indications (from idiosyncrasy, etc). The staining effect is made up for by the rapid influence on the malarial symptoms (neuralgia, etc.).

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Treatment of Malaria with Methylenblue (By P. Guttmann).—*Berliner Medic. Gesellschaft*, December 14, 1892).—Guttmann recommends the drug in doses of 0.1 (two grains), for the first week 0.5 *pro die*; for the second, third, and fourth week, 0.3 *pro die* The slightly painful irritability of the bladder does not appear if the patient takes a little nutmeg powder every day. G. does not find any contraindications.—*Ad. Meyer.*

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Fournier gives a practical hint on what a physician has to do, if he finds syphilis in a lady who consults him, and wants to know what she is suffering from. If the lady is married, tell her that you should prefer to speak to her husband. If the lady is innocent she will not make any objections; then you may leave it in hand of the husband to conceal his fault. If the lady does not agree with your proposition, and feels guilty, then she may be informed of the consequences, and she has to make herself the arrangement for the necessary sexual separation and for the treatment. The demi-monde will scarcely require special regards. Centralbl. f. Chirurgie.

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Prof. Sommerbrodt (Breslau) encourages the profession to use his method of treatment with creosote, not only in the tuberculosis of the adult, but also in scrofulous children. He recommends the capsules with creosote one and a half grains dissolved in cod liver oil. The desirable daily quantity for children is ½-1½ grammes 10-25 grains). He quotes a patient of Dr. Kloidt that began with 15 grains a day and finally took for several months 2 drachms every day with very good result. (He increased 30 pounds in weight). Prof. von Ziemssen writes on this treatment: "The creosote method has been used in my clinique for years with the best results, and our patients take now 3 grammes every day and bear it well (with a few exceptions)."

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E. Sieveking (on the specific gravity of the urine in *Diabetes mellitus*) found sugar in a case where the specific gravity of the urine ranged between 1012, 1010 and 1014, and warns against the assumption that the presence of sugar can be excluded in a urine of low specific gravity, without an examination. Salkowski has even found sugar in a urine of a spec. gravity of 1006.—(Centralbl. für med. Wiss.)

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Kast, on the action of *Sulfonal* (Arch. f. experim. Pathol. und Pharmacologie). K. comes to the following conclusions: 1. The highest doses for producing sleep should be 2 g. (30 grains) for men, and 1 g. (15 grains) for women. As sulfonal is excreted very slowly, the doses should not be repeated on the same day in most individuals. Where the patient is under constant observation (asylums), higher doses may be used exceptionally. 2. Experience and experiments make it advisable to stop after a prolonged use from time to time for one or several days. 3. Loss of appetite, qualmishness, and before all, vomiting, after the use of sulfonal, pain in the stomach or especially excretion of urine containing haematoporphyrin (red color), are signs of a temporary or lasting intolerance of the organism, and indicate discontinuation of the drug. 4. When given within these limits sulfonal is a harmless drug.

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Welander (Stockholm), on absorption and elimination of mercury, shows that if he spread mercurial ointment, (1

drachm of 1 part mercury and 2 parts adeps) on oil-cloth and applied it so to the skin that no ointment could touch the skin, he obtained as good and rapid a saturation with mercury as with inunctions. He thus concludes that the absorption takes place after evaporation of the Hg., partly by the respiratory organs, partly by the skin. He therefore gives the advice to spread about 1½ drachms as a thin layer over the skin, to apply a bandage of linen, to let the patients stay in bed for about 10 hours and then take a bath. The difference between this method and the results of inunctions made under similar conditions, shown by curves, is remarkable. The quickest results have been obtained where inunction and the method mentioned were combined.

Du Castel recommends for the treatment of ulcus molle a cauterization with a 10 per cent. solution of carbolic acid in alcohol. The application is not very painful; as a rule, one application is sufficient to effect cicatrization of the ulcus under iodoform within four or five days.

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Krecke, on massage and mobilization in fractures (*Centralblatt fur mediz. Wissenschaften*).—In malleolar fractures without dislocation a bandage is superfluous; in the same fractures with dislocation it has to be applied for a few days only. In the former on the second day, in the latter on the fourth day, active movements and massage must be begun; a week after this the patient may try to stand; and in a fortnight he is, as a rule, able to walk quite well. In fractures of the lower end of the radius the bandage has to be applied for a week, leaving the fingers free; then mobilizing treatment should be begun, with which complete repair of the function can be obtained within three weeks. Fractures of the femur, of the humerus, of both radius and ulna, and tibia and fibula, require a longer immobilization.

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Ambulant treatment of fractures of the leg and thigh, by Dr. Korsch (*Berliner Klin. Wochenschrift*, No. 2, 1893.)

Dr. Korsch, at Prof. Bardeleben's Clinique, applies a light plaster of Paris bandage *directly* on the skin, which is oiled a little before. The foot is in rectangular dorsal flexion and varus position, the knee slightly bent. For a fracture of the leg, the bandage extends from the toes to the lower third of the thigh; in fractures of the femur, a sheet iron ring round the pelvis and wires of four mm support the whole bandage. The bandage is applied as soon as the swelling begins to decrease, in fractures of the thigh on the sixth or seventh day. Even compound fractures were treated in this way. The patient is allowed to go about and can even do some work. The bandage is changed every ten to fourteen days. The results are very satisfactory; the atrophy of the muscles and the stiffness of the joints are decidedly less marked and the process of repair is not impaired. The method requires, of course, good practice in applying the bandage.

FRENCH NOTES.

TRANSLATED BY E. W. BING, M. D.

CHESTER, PA.

SACCHARINE IN OZOENA (Felici).—Among the numerous remedies for this condition, saccharine has seemed by its known antiseptic qualities to fill an important place. It has been shown that it has decided antiseptic action, by experiments on the process of fermentation and putrefaction in urinary troubles, and also in stomach dyspepsia (from fermenting material). The author considers that he is the first one to employ it in ozoena, and this is his method of proceeding: The scabs are softened with liquid vaseline, sprayed or brushed on, then removed by means of a douche. Then an alkaline douche containing from one-half to one gram of saccharine, and this repeated twice a day. The drug is devoid of irritant properties, as may be seen by inspection of the nasal membrane after its use. The odor is completely removed. As it succeeds better in some cases than in others, the author divided the cases into three groups, according to the stage of the disease. One, cases with hypertrophy and degeneration of the mucous membrane of the middle and inferior turbinated bones; two, cases of atrophy of same parts; three, cases in which apparently no lesions existed, but

where a strong and characteristic odor was present, together with dirty greenish secretion which was reproduced in a few days after removal, and where there was at the same time dry pharyngitis.

In the first group only slight improvement was obtained.

In the second, the odor almost disappeared, and the secretion was modified. In the third, the odor completely disappeared, even after suspension of the douches, and the secretion became seromucous. The relative failure in the cases of the first group did not prove the inefficacy of the remedy, since on account of the anfractuosities of the membrane, the wash could not penetrate into some parts, resulting in incomplete antisepsis; perhaps by a more thorough application the results would have been different. Saccharine in the dose indicated is well borne, and produces no unpleasantness, except that of a very sweet taste. In a few patients the solution of strength of 1.50 gms. to 500 gms. of water produced slight headache.

As an antiseptic in the treatment of ozœna, the author believes saccharine to be superior to salicylic acid, sulpho-carbolate of zinc, and boric acid.—*Rev. Internat. de Rhinologie, Otol. et Laryng*

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Arslan recommends the treatment of diarrhœa and cholera in children by electricity. The application of the faradic current over the abdomen has been followed by success in fifteen cases, without any other medication. The method consists in the application of the current once in twenty-four hours, or twice, if the case is severe. The position of the sponge holders is changed from place to place. The time of the sitting is about one or two minutes. The current is well tolerated, and should be strong enough to produce visible contractions of the muscles. Diarrhœa generally stops and other symptoms improve after three or five sittings. Electricity has no effect on the diarrhœa of dysentery. The effect is probably due to reflex action on the innervation of the intestine.—*Rev. de Therap. Med. Chir.*

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Medical Chemistry at the Bedside.—At the College of Physicians, Vienna, Dr. Freund read a paper on the use of Chemistry at the bedside. The analysis of the secretions and excretions, gives important indications for diagnosis and prognosis. Thus where there is a question between tuberculosis and typhoid fever, increase of the earthy phosphates without increase of the total phosphoric acid, together with an excess of indican point to tuberculosis. In meningitis there is increase of phosphoric acid over the nitrogenous elimination. In tubercular meningitis the peptones only appear in very small amounts, while in suppurative meningitis they are abundant.

In anæmia, the absence of urobilin indicates chlorosis; but urobilinuria indicates a grave condition (destruction of the red globules). There is relative increase of uric and sulphuric acids, in pseudolencocythemia. In hematemesis, not only the free, but the combined hydrochloric acid, should be sought for in the vomited matters. In ulcer or the stomach, there is always increase of HCl. The urine is pale, also feebly acid and quickly neutralized by alkalies. On the other hand, in cancer of the stomach, the urine is very acid and can only be neutralized after the daily use of 10 grammes of bicarb. soda, continued for two or three days. The nitrogen in the extractive matters is increased. In conditions of stasis, examination of the urine enables us to distinguish between an affection of the heart, and one of the kidneys, or of the liver.

In nephritis the urine is poor in salts, especially in phosphates. In heart trouble the urine, while concentrated, is otherwise but little modified. In cirrhosis of the liver, the urobilin is abundant, urea diminished, ammonia and uric acid relatively increased, the lactates are not entirely burnt up, and are partly excreted in the urine. Freund confirms the researches of Gilles de la Tourette, concerning the urine in hysteria and epilepsy. In hysteria the proportion of the earthy to the alkaline phosphates is modified as 1:3; 1:2; or even 1:1. In intestinal obstruction the situation of the obstacle may be judged from the quantity of the urine; the absence of scatosyl excluding the affection from the large intestine.

Sehrwald says that a diagnosis may be made between affections of the malpighian bodies and the tubules, by urinary examinations. Urea being retained in the last case, the diet should be sparing in albuminous matter. In glomerular nephritis, any albuminous food may be used without restraint, but the quantity of salts should be limited. The increase of the quantity of urine is favorable in stasic conditions, but should not be too sudden, In nephritis increase of urea is a favorable sign. In rheumatism, diminution of acidity and increase of lime salts is a good prognosis. The proportion of earthyphosphates to eliminated nitrogen and indican give the prognosis of phthisis.

ARISTOL INTERNALLY.—Brooke (*Medical Bulletin*) has given aristol internally for a variety of diarrhœal affections, characterized by offensive, muco-purulent and bloody stools. In a case of enterocolitis in a child one year old, he gave the following:

℞.—Aristol . . . . . gr. vijss
Pulv. ipecacuanhæ comp. . . . gr. v
Pulv. sacchari lactis. . . . . gr. xv
M. et in Chart. No. x. divide.
S.—One every two hours.

COCILLANA.—Shoemaker (*Med. Bulletin*) has employed cocillana with very good effect in a number of cases of subacute and chronic bronchitis, spasmodic croup, post-morbillous and post-grippal cough, asthma, hay-fever, the declining stage of lobular pneumonia, and in the early stages of phthisis. The dose was from ten to twenty drops of the fluid extract, given with the syrup. The special indication appears to be a dry, hacking cough, with little or no secretion.

NERVOUS DISTURBANCES AFTER REMOVAL AND ATROPHY OF TESTICLES.—In 1880, there came to me a patient from an adjoining State, who, after the removal of one testicle, had, in addition to persistent *neuralgia testis*, symptoms much like those described by Weiss, the melancholia being associated with hypochondriasis. After a course of treatment extending over one year, which included local galvanism for the relief of the neuralgia, the patient's nervous symptoms and pain disappeared. He improved much in general tone, but persisted in believing that his scrotum was too long, and went East and had it shortened, which operation seemed to satisfy him, and the patient has remained well ever since, and is virile.

A patient from a neighboring State, of good physique, good mental capacity and intelligence (a professional man from Iowa), after atrophy of both testicles without scrotal pain, one testicle being the size of a lima bean, the other not larger than a small peach stone, became neurasthenic and sexually hypochondriacal (the latter a reasonable fear, however), somewhat sleepless and mentally depressed, but has improved under treatment in all except his doubts as to his virility, which are well grounded, though he has never tested his sexual powers.—C. H. Hughes, *Medical Mirror*.

ILLUMINATING THE STOMACH.—The instrument of Heryng consists of an elastic œsophageal probang, having at its extremity a little Edison lamp with a luminous intensity of four candles. The electrical probang contains two threads connecting the lamp with the source of the electricity, and two tubes, allowing the passage of a current of water, to prevent the surrounding parts being heated. The intention is, not to see into the interior of the stomach, but simply to study the modifications presented by the transparency of its walls.

The Gastrodiaphanoscope is introduced into the stomach in the same way as the probang for washing. The upper wall of the stomach is then shown clearly. In looking at this wall, you see, when the lamp is burning, the outlines of the stomach in the form of an oval line, bright red, on a base of deep gray-red. When the lamp is at the centre of the stomach, you can distinguish the lower, lateral and upper limits of the organ, and can outline the shape with precision. When the lamp is placed near the upper orifice of the stomach, you can see the cul-de-sac, called the *fundus cardiacus*, forming a bright-red band, elongated, of the breadth of two fingers. In case of

an enlargement of the stomach you can see the limits of the lower part descend, as far as the *pubic symphysis*, as is the case in certain maladies.—*La Nature.* —*Literary Digest.*

PIPERAZINE.—D. D. Stewart (*Ther. Gaz.*) reports three cases of urinary calculus treated by piperazine. In two, a cure is claimed; all symptoms having subsided for some months. The third case was one of mulberry calculus, on which piperazine has no solvent action.

CANCER was treated of by W. Roger Williams, in a paper read before the Manchester Medical Society. He stated that cancer was steadily increasing in frequency, while tuberculosis, small-pox, ague, typhus and dysentery have decreased in England. In 1838 cancer prevailed in proportion to the population, at the rate of 1 to 6244, and as 1 to 140 of the total deaths. In 1890 the figures were 1 to 1480, and 1 to 28. In other countries the same increase was noted, corresponding with the increase in population, comfort and general wealth; while in Ireland, where the population grows scantier and poorer, the cancer death rate is lower and presents no such marked increase. In Great Britian the increase is greatest in males, and in those over the age of fifty-five years. Excess of food and want of exercise are the main factors.

MCKESSON & ROBBINS are introducing a new line of preparations, consisting of zinc stearate combined with various local remedies. The stearate is in the form of an impalpable powder, and is suitable for dressing wounds, ulcers, etc., as dusting powders. A special insufflator, called the "Pulverflator," has also been devised to utilize the powders. For the urethra, a wire speculum is attached.

SPEAKING of Papoid, F. A. Thompson (*Bulletin of Pharmacy*), says: I wish, in conclusion, to add that the carefully prepared ferment of the unripe fruit of *Carica papaya*, or the fresh juice, has a proteolytic action on proteids in alkaline, acid, and neutral media, but it is very weak, compared with the action of the ferment of the pineapple (*Ananassa sativa*), which acts in the same media and has, I believe, promise of great value in medicine.—*Med. Age.*

OPACITY OF THE CORNEA.—

Blue ointment,	1;
Lanoline,	
Yellow vaseline,	2.

A little of this ointment is introduced into the inner canthus and gentle massage made of the eyeball with the finger, armed with a piece of cotton wool.

HYDRARTHROSIS OF THE KNEE.—

Lanoline,	60 gr.
Dermatol,	15 gr.
Tincture of iodine,	10 gr.
Ess. of winter green,	5 gr.

Envelope with cotton wool after each friction.

OZŒNA.—

Iodide,	equal parts.
Salol,	
Dermatol,	
Aristol,	
Eucalyptol,	
Menthol,	

To be sniffed every two hours (specific against fœtidity).—*Med. Press.*

NEURINE IN CANCER.—Adamkiewicz obtained a filtrate by rubbing cancerous matter with sterilized water. This filtrate, injected into a rabbit's brain, caused death within twenty-four hours. Sarcoma extract, Koch's lymph, etc., did not have this effect; which is so uniform and unique as to be diagnostic. From this he deduces the existence of a cancer virus, from a microbe, that does not thrive in ordinary culture media, but finds the brain a suitable nidus. Regarding cancer cells as independent living organisms, he terms them sarcolytes. Cancroin is the metabolic product of these, and should exert a destructive influence upon them. Neurine is practically identical with cancroin, in chemical composition and in physiological action. This, he employed in a case of cancer, and obtained curative effects upon the growth and its metastases. He used a twenty-five per cent. aqueous solution, neutralized with citric

acid, carbolized and diluted with two parts of water. This was injected hypodermically and proved sedative, analgesic and disinfectant, destroying, the cancerous tissue by absorption, inflammation and necrosis. In twenty-five cases of carcinoma, neurine was used with excellent effect.—*Int. Jour. Surgery.*

Treatment of Puerperal Fever.—*Prevention.*—The hands of those attending the patient should be surgically clean, the bed promptly freed from all blood staining, any fragments of membrane or placenta removed by careful syringing with sterilized water, which may or may not contain an antiseptic drug in solution. In event of a lengthy labor this syringing is still more important. Any laceration of the perinæum proper should be at once repaired and dusted with iodoform. Vaginal syringing should be continued daily when there is reason to suspect laceration of the cervix, when there has been much loss of blood, a prolonged labor, a dead child, or in unhealthy subjects.

2. When septic fever has occurred, a mixture containing ergot and iron should be given to keep the uterine sinuses as much closed as possible, and the resisting power of the blood at its best. When called to such a case I rinse out the vagina, introduce a duckbill speculum, and sieze the os with a tenaculum forceps on each side. The flushing curette is then passed into the uterus to the fundus, and the uterus well flushed out. On withdrawing the curette an iodoform suppository is pushed into the uterus. By means of a large glass tube a teaspoonful or two of powdered boracic acid with iodoform is blown into the upper vagina and on to the os. In some few cases this may need repeating; in most instances the nurse simply continues to syringe out the vagina.

Abdominal section and flushing out the peritoneum one would only expect to yield good results in cases of acute peritonitis apparently set up from pre-existing Fallopian tube mischief. Even then, unless there were evidence of much fluid effusion, I should certainly hesitate to operate. I say so, for in a case of this kind under my care abdominal section was discussed and abandoned because there was no great effusion detectable. The lady lay in a moribund condition for some hours, yet ultimately made a good and rapid recovery.

The more nearly the present methods of wound management are applied by the accoucheur to the large wound of the genital tract with which he is dealing, the more rarely will he meet with unpleasant surprises and deaths. Happy the man who can speak in the same strain as Perikles, who, at the close of an active life, reviewing his past, counted it as "the best thing in my life—I have never caused an Athenian to put on mourning."—Clegg, *Provinc. Med. Jour.*

Camphoric acid was employed by Howard (*Maryland Med. Jour.*) in seven cases of night sweats from phthisis, with very good results. He also gave it in one case of acute rheumatism, in which the profuse sweating was completely controlled, but no improvement in the other symptoms ensued.

Peach Fever is the name given by Dr. C. L. G. Atkinson (*Maryland Med. Jour.*) to an affection prevalent in the Peninsula during the peach season. The symptoms are those of hay fever, with pruritus of the skin, and even a true dermatitis.

Pinard considers the milk diet a perfect preventive of puerperal eclampsia. In the treatment of convulsions, Robin recommends oxygen inhalations, benzoic or salicylic acid, and blood-letting.

News.

Monthly Bulletin of the New York State Board of Health—During December there was an average daily death rate of 308. In November, which is always a month of low mortality, there were 281 deaths daily. In December, 1891, there were 362, or deducting the deaths from epidemic influenza then prevailing, 297. Excepting June and November there were fewer deaths than in any month of the year.

Of the deaths occurring under the age of five years, there were 29 per cent. which is below the average for this season. The Zymotic mortality was both actually and relatively less than in November. The only disease of this class showing an increase over last month is Scarlet Fever, from which there were 195 deaths; of these, 26 occurred in rural districts; its mortality is lower than during the first half of the year. Diphtheria caused fewer deaths than in November, but for the past two months has been more prevalent than for a year past. No new localities report its prevalence. Typhoid Fever has caused 147 deaths, which is less than in any month since July. From Acute Respiratory diseases there were 1,737 deaths, an increase of 300 over November, but about the same as in December, 1891. There is likewise an increase of 200 deaths from consumption. From diseases of the Circulatory, Urinary and Nervous systems, there is an increase over last month, but the mortality is not above the average for the year. Returns are received of deaths from Epidemic influenza; if again prevalent as is probable, it is in such mild form as to but little increase the mortality, as heretofore, in diseases of the respiratory, digestive and nervous organs; there were not more than 300 or 400 deaths from it. The death rate for the six large cities was 22 per 1,000 population; of rural towns it was 17. Typhus Fever caused 5 deaths in New York.

BE CAREFUL.—An advertising proposition received from a bicycle manufacturing company apparently offers a wheel in exchange for about double its cost in advertising. On careful reading, however, it really calls for about sixty per cent. in cash; the order for advertising being accepted "when accompanied by publisher's specified prices, in cash for." The parties are either bad rhetoricians or slick citizens.

NAVY DEPARTMENT, (Bureau of Medicine and Surgery) Washington, D. C.—Changes in the Medical Corps of the U. S. Navy for the week ending February 11, 1893: Asst. Surgeon B. R. Ward ordered to training ship "Richmond." Surgeon George F. Winslow ordered to the U. S. S. "Monterey." Pd. Asst. Surgeon, W. F. Ambold ordered to the U. S. S. "Monterey." Asst. Surgeon L. L. Von Wedekind ordered to examination preliminary to promotion. Asst. Surgeon Geo. A. Lung ordered to examination preliminary to promotion.

WE have received from John M. Scudder & Sons, of Cincinnati, a copy of their chart entitled "The Fathers of Eclecticism." It contains portraits of thirteen prominent lights of that school, including Beach, the founder, Merrill, Scudder, King, Buchanan, etc. The price of the chart is fifty cents.

Dr. Kauffman should have adopted another name for his journal than *The Medical Bulletin*. There is already a journal with that title, and its adoption violates a courteous custom that has always heretofore obtained among medical journalists, even when the name is not protected by copyright.

The first number of the *Woman's Medical Journal* is before us. It is edited by E. M. Roys-Gavitt and Claudia Q. Murphy, the business manager is Margaret L. Hackendorn and the journal is issued by the Recorder Publishing Co., of Toledo, Ohio. This number contains a short paper by Mary Putman Jacobi, on permanent drainage in endometritis, also one by Elizabeth Woods on chronic metritis and endometritis.

Portugal has dismissed the lay nurses from the public hospitals, and restored the sisterhoods, in spite of the opposition of the staff and management.

The natives of the New Hebrides poison arrows by dipping them in marshy earth. This earth contains the tetanus bacillus and the vibrio septicus.

The Lambeth Public Analyst reports that 27 per cent. of the drugs examined by him were adulterated.

The Times and Register.

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CAUSE OF HEART FAILURE, BRIGHT'S DISEASE, AND CHRONIC DISEASES GENERALLY.

By N. B. SHADE, M. D.

WASHINGTON, D. C.

THE frequent deaths of late, said to result from *heart failure* and *Bright's disease*, are startling. The terms "heart failure" and "Bright's disease" are calculated to hide a multitude of diseases; even as magnanimously as the Scripture, which sayeth, "Charity hideth a multitude of sins."

The only explanation that will account for the assertion: "He died of Bright's disease," is deception or ignorance on the part of the physician, ninety-nine times in every hundred cases. I dare say that a majority of the medical profession will bear me out in the assertion, that scarcely the one-hundredth of the deaths, said to result from Bright's disease, are really caused by the disease of the kidneys discovered by Dr. Bright many years ago. Physicians unhesitatingly diagnose Bright's disease without the use of the microscope; when they know, at least regular physicians should know, that it requires a microscope with 250 to 300 diameters magnifying power to see the tube-casts peculiar to the disease; and that this is the only reliable test, without which no one can diagnose Bright's disease.

It would be interesting indeed to know what percentage of our noble profession understands how to make a microscopical examination, or how many even own a microscope that will reveal the tube-casts in Bright's disease; to say nothing of the 500 to 600 diameters required to see the bacillus in tubercular sputum. Yet how many of us will make out a diagnosis by a glance at the tongue, feel the pulse, and possibly test the urine by heat and acid only, and pronounce it a case of *Bright's disease;* especially how easy to come to this conclusion if we think the case is going to die—heart failure often thrown in.

In many other cases it seems just the thing to do, to pronounce the case "heart failure" while there is no such disease recognized in *scientific medicine*,—possibly because everybody who has died did so on account of that organ ceasing to perform its functions.

It is time that we were knowing more about idiopathic diseases; origin, predisposition, susceptibility—whether inherited or acquired. In the majority of heart and kidney troubles a susceptibility to develop the disease is acquired. However, the temperament and diathesis may be inherited only to a degree. For instance, a man may inherit a nervous-bilious temperament, and possibly a full habit, which represents the majority of our literary men, politicians and statesmen, who, with proper diet and management of the physical system so that the secretions are properly eliminated through their normal channels, may live out their allotted time of "three score years and ten." But if, instead, the secretions of the system are sluggish and in addition the sedentary life is his lot,

how easily the constitution is undermined by an overloaded and sluggish glandular system and a heavy volume of blood, caused by a vitiated chyle because the contents of the alimentary canal are retained too long and is ever and anon in a crowded condition, only slightly relieved by a small defecation daily—if that often—perchance. Some little head trouble occasionally or a fullness of the abdomen possibly accompanied sometimes with eructations, indigestion, etc., may be all the inconvenience suffered for months and even for years before alarming symptoms appear.

I have discovered in twenty-three years experience that a retention of the contents of the alimentary canal produces more or less fermentation and the kidneys are required to eliminate secretions that should have passed off by the rectum, if there is a uric acid diathesis—which is almost invariably the case in the full habit and sedentary lived person—it will be discovered that fatty degeneration of the heart or kidney trouble, possibly both, will surely develop.

The chyliferous vessels are under the necessity of carrying the vitiated chyle (nutriment) into the right heart where it intermingles with the venous blood and immediately pumped into the lungs for renovation, oxygenation and purified, as it were, before it reaches the left heart, when it is recognized as arterial blood and is sent on its mission of nourishing the tissues of the physical system. It should be very readily recognized how the law of osmosis is interferred with on account of the heavily loaded volume of blood. The lungs are burdened with the task of throwing off the carbon, excrementitious matter, and poisonous gases which the chyliferous vessels carry into the circulation from the duodenum, so that secretions not disposed of through the normal channels necessarily find the only source of exit through the chyliferous vessels, heart and lungs, which organs suffer in proportion to the length of time exposed to the unwholesome mass of vitiated blood, chyle and fermented garbage from the alimentary canal. It is easy to imagine what effect this condition of the secretions would have upon the organs mentioned. The kidneys are especially overworked, distilling fluids unwholesome, most foul and poisonous. Month after month and maybe year after year this abnormal condition of the secretions is allowed to go on until all resisting power is gone and the strong man must succumb to the continual "dropping of the water which wears away the rock," and a general breaking down of the system is the result. The heart and lungs, possibly one or both, gives way, producing shortness of breath, indicating generally that the law of osmosis is impeded and the blood cannot pass through the lungs fast enough to allow the heart free action; so we have regurgitation, the blood coming back on the heart, which often produces dilatation and a flabby condition of the organ, as in the case of the late James G. Blaine.

Many deaths are caused in this way; in other cases the blood frequently rupturing the walls of the blood vessels and finding way into the bronchial tubes and producing hemorrhage, as no doubt was the cause of Benj. Butler's death. It may be that the walls of the arteries are somewhere else ruptured, possibly in the brain or spinal cord, producing paralysis, "a stroke", apoplexy, which terms are synonymous; or it may be the kidneys lose their function and the patient suffers with uremia, which is nothing more than blood poison. In fact the majority of cases, such as I have indicated, suffer more or less with uremia; because the kidneys have been overworked in eliminating excrementatious matter for so long a time, that a real tissue change has taken place in the kidney and producing organic disease of said organ. Uremia, toxemia and coma follow each other, mostly, very rapidly as in my mind no doubt was the cause of the death of James G. Blaine, complicated by dilatation of the valves of the heart.

In the cases I have enumerated, it is more than probable that we may have just such conditions appear as will lead the physician to attribute death to heart failure, because the heart is affected or Bright's disease, because the kidneys have lost their function or there may be a fatty degeneration of both heart and kidneys, because all the symptoms and pathological conditions may be caused by rentition of the secretions as I have tried to bring out in this condensed ar-

ticle. In other words, a susceptible condition to develope the symptoms and diseases I have mentioned, is produced by not getting rid of that which is retained in the physical system.

This residue is allowed to remain to ferment and decompose and pass into the circulation. What matters it whether my patient's principal systems indicate heart trouble, kidney disease or apoplexy, when the development and final result of the disease depends on the condition of the secretions, which have by this time produced an entire change of the mucous membrane of the entire body as well as of the cellular tissue, arteries, nerve centers, etc. The fact is that unless we succeed in cleansing the mucous surfaces and keep them clean, and stimulate the glandular system sufficiently to carry off all surplus secretions and thereby get back to a normal condition before the patient's resisting power is all gone, but little if anything will be accomplished in removing the cause from which almost all chronic diseases derive fertilization and development. What is to be done? Common sense and good judgment come to our rescue and suggest that the inside of the body, the mucous surfaces, be kept clean from which all nourishment for the body is directly secured. As long as this is not done there is more or less preparation going on in the system, in the way of susceptibility, or predisposition to the diseases I have already suggested; or a general giving way of the whole system showing itself in one of the said affections. I suggest that a person in full habit, uric acid diathesis or not, though of a somewhat constipated habit whether occasionally or habitually, should use hot water and a refined magnesia or seidlitz salt, a cup or more of the menstrum every day in the morning on an empty stomach to wash out the convolutions and folds of the stomach and intestines. This I hold is as important and much more so, in my estimation, than cleanliness of the exterior of the body. *The mild antacid or seidlitz salt and hot water is to the inside of the body what soap and water is to the outside.*

In addition to this washing or flushing of the stomach and duodenum with hot water and a seidlitz salt every morning, preparatory to the stomach and bowels' work of receiving and assimilating food during the day. I also advise in many cases flushing the colon with as much hot water as can be taken conveniently by enema twice or thrice weekly, which I have used for twenty-three years. Especially do I recommend both in a person of full habit and whose system is heavily loaded with excrementatious secretions, etc. Possibly after a while he can manage his case very well with the flushings per enema alone or the flushings per stomach with the hot water and a little magnesia or seidlitz salt. In those of a less full habit I find the flushings per enema are quite sufficient in not only relieving the crowded condition of the alimentary canal and superinduce peristalsis, but also relieving a crowded condition of the abdominal cavity, relieving displacements of the bladder, pressure of the prostate gland and kidneys, indigestion of the bowels, etc. Also in many other troubles peculiar to the female sex where a crowded condition of the abdominal viscera produces womb displacements, irritable ovaries, hemorrhages, and a host of complaints too numerous to mention at this time.

While cleansing the whole line of the tract of intestines, as I have indicated already in many cases, the glandular system needs stimulation in order that the functions of the system may resume a normal condition, depending entirely on the requirements indicated by conditions peculiar to the temperament and diathesis of the patient.

I desire to impress the idea that good common sense exercised in the way of using preventive means or medicine is the rational thing to do at this age. I most sincerely believe that the time is coming and is now really beginning to dawn upon us, when longevity will be the rule and not the exception, depending on cleanliness of the inner as well as the outer man, and when we will—as some now are doing, viz.: anticipate disease and dangers ahead, by taking preventive medicine. How much more rational to take preventive medicine to keep well than to wait until disease has succeeded in making inroads upon us, undermining the constitution. Every intelligent person should consult a physi-

cian while in health as to the dangers that lie ahead in his pathway, possibly marked out by his ancestors. And if he has not inherited a predisposition to disease he should know what diseases he may be in danger of acquiring, so that good common sense precautions may be exercised if no preventative medicine is needed.

The scripture, "know thyself," applies very well to the intelligent management, in understanding how to keep the system in such perfect order that not sufficient fertilization from the alimentary canal is retained to entertain and develop the germs of disease, with which we necessarily come in contact daily.

In conclusion let me say that when we have succeeded in disciplining the laity with the great necessity of consulting a physician when in health, *how to keep well*, instead of telling them they need no medicine or advice when "an ounce of prevention is worth a pound of cure." Then, and only then, will we have reached the zenith in scientific medicine which is God given, and have acquired fame in the greatest science on earth vouchsafed to men.

WASHINGTON, D. C.

FEEDING OF THE INFANT.

By HERMAN D. MARCUS, M.D.

[Resident Physician Philadelphia Hospital.]

THE question of feeding the new born infant is probably the most vital one in the happy household. How often do we hear the statements that: "My milk has run out!" or "I have no milk for my baby," and so on. There is no doubt that the proper feeding of the babe becomes at times of the greatest importance, and the proper disposition of this question has a great deal to do with prolonging the child's life and keeping it healthy!

About ninety-five per cent. of all the diseases to which the new born babe is heir to may generally be reduced to some error in its diet. Where the baby has not the advantage of its mother's milk, and where the services of a wet nurse can or will not be secured, and the question of artificial nourishment must be considered, the physician has undertaken to supply the child with such food as will best help to keep up its health.

There cannot be any rules laid down as to the amount and strength of the milk to be given, whether to use it sterilized or peptonized, whether to employ condensed milk or one of the many infants' foods in the market. While one child may thrive on one mixture, the same food given to another child will cause a state of alimentary disturbances, which may lead to an extensive use of paregoric and soda mint by the mother, and the free use of calomel by the physician. The only rule in regard to feeding the child is regularity. No matter what mixture the physician may prescribe, he must insist on having the child fed at proper intervals.

The best substitute for mothers' milk is undoubtedly cows' milk, although the milk of other mammals has been found quite a good substitute. Asses' milk is used extensively in some of the southern countries of Europe and goats' milk is in great demand in the mountainous regions of the continent.

If cows' milk is used we must pay strict attention to its purity. The milk should be tested at odd times and a careful watch must be kept to prevent some unscrupulous dealer from supplying a mixture of chalk and water to the family.

The testing of milk is not a difficult matter, although the average physician may find some trouble in making a thorough *scientific* examination.

Good milk should be neutral or slightly acid and be of a certain sp. gr. Dr. Parkes has arranged a table which shows the sp. gr. of milk at 60° with the addition of different quantities of water as follows:

	Sp.	Gr.
Original,	1035.5	1025
9 milk and 1 water,	1027	1023
8 " 2 "	1024	1019
7 " 3 "	1021	1017.5
6 " 4 "	1018	1016
5 " 5 "	1015	

A very frequent mistake made is the too free dilution of the milk. We must make the artificial food as nearly alike to mothers' milk as possible.

Vernois and Becquerel, in analyzing human milk, find the percentage of caseine and sugar to be nearly alike to that of cows' milk, a claim which most writers repudiate. Thus the analysis of Vernois

and Becquerel shows that mothers' milk contains the following percentage of:

Fats	2.666
Caseine	3.924
Sugar	4.364
Salts	.138
Water	88.908
	100.000

while if we compare this analysis with that made by Dr. Meigs of cow's milk we find the following:

Fats	3.544
Caseine	4.405
Sugar	4.278
Salts	.764
Water	87.009
	100.000

thereby showing that the amount of caseine and sugar contained in mothers' milk is nearly alike to that of cows' milk.

There is a question that this is wrong. Mothers' milk contains undoubtedly less caseine and more sugar than cows' milk. To make cows' milk as near alike to mothers' milk as possible we must then decrease the amount of caseine and increase the amount of sugar. Pure rich cows' milk (sp. gr. 1030) should be at least diluted in proportion of two parts milk and one part water, or, which is still better, equally diluted for new born babes.

The amount per diem and the frequency of the feedings should be carefully regulated. Bouchard, of the Paris maternity hospital, thus recommends the following table:

1st day	1 ounce
2nd "	5 "
3rd "	14 "
4th "	17 "
After 1st month	20 "
" 3rd "	23 "
" 4th "	27 "
6th to 9th "	30 "

This table is a little underestimated, and it may be well to go a little above this amount, thus giving a babe of one month about 24 oz., at two or three months about 30-35 oz. and so on.

The child fed during the first month every two hours by day and about three times by night, should at the age or six months be fed about 6-7 times daily, and once during the night, necessarily increasing the strength and quantity of each feeding.

Of late years the use of condensed milk has been greatly advocated, and while showing some excellent results in isolated cases, it will be found that where good rich cows' milk can be procured, and where this milk is given properly the results will be far better than those obtained by condensed milk.

In hospital practice, especially where foundlings are admitted, the question of proper feeding becomes even more serious than in private practice. The babe born, no matter under what surroundings, will be less apt to be reduced to "a bag of skin and bones" if in care of its mother, but the poor foundling picked up in the gutter or on the housestep, will, when received in the foundling hospital, give the physician some thought.

Such a child is generally in a very debilitated condition, suffering from marasmus, intestinal or gastric disturbances.

Cows' milk alone will generally be found insufficient and for such cases we must use more nourishing food, food which will help the child regain its strength and health quickly. I have found that in these cases as well as such which on account of some constitutional disturbances have lost weight rapidly, bovinine is very beneficial. Although not favoring beef extracts and preparations as an adjunct to infants' food the purity and excellence of this article has led me to prescribe it quite extensively. Bovinine when given to children acts as no other beef preparation does, quickly correcting any intestinal disturbances, the child regaining its strength and we soon find in place of the puny, wasted child a well nourished healthy babe.

Bovinine is a liquid beef preparation containing the very elements neccessary to bring back the lost vitality.

Dr. Gray, of the U. S. Army Medical Museum, in making a microscopical examination of bovinine, found it free of fibrin or bacteriæ, and especially rich in red and white corpuscles, fat globules, crystals of leucine and tyrosine.

I have used this preparation in quite a number of children suffering from the marasmus, gastritis, and intestinal disorders, and I have found it to be of the greatest benefit in combating these so common diseases.

Thus when bovinine is combined with proper milk, the child will generally regain its strength and soon be on the road to recovery, and out of all danger of fall-

ing a victim to the ravages of mal-nutrition.

The dose generally used ranges from 3-8 drops with each feeding, gradually increasing the amount.

In conclusion, I wish to draw attention to the proper hygienic conditions necessary to the health of the child.

Plenty of air and warm clothing, or to quote the old saying, "Head cool, feet warm," will be found equally important factors to the well being of the "King of the Household."

Special Article.

INVOLUTION FORM OF THE TUBERCLE BACILLUS AND THE EFFECT OF SUBCUTANEOUS INJECTIONS OF ORGANIC SUBSTANCES ON INFLAMMATIONS.[1]

By SAMUEL G. DIXON, M. D.

PROF. ROBERT KOCH announced in 1882 the discovery of the cause of tuberculosis. He claimed that consumption was produced by a *peculiar bacillus of a special shape*. This he described as a rod-shaped micro organism with rounded ends, either straight or curved, and frequently beaded. This simple form was accepted as a constant character until the summer of 1889, when I first observed, in an artificial culture on an Agar Agar glycerin nidus a slight inclination to bud in one or more places along the rod without the production of any particular angle, some relations forming an acute while others formed a right or possibly an obtuse angle. A single bud could only be recognized with a high power objective focused and illuminated with particular nicety. The indications, however, were so often repeated in each field as the slide was moved upon the stage of the microscope that I was sufficiently convinced of the presence of branches to review the life-history of the tube in which they were found and to speculate upon the factors likely to have brought about the evident volution. The result was the production of germs with decided *branches*, some of which were quite as long as the parent rods or stems.

This result was published in the *Medical News* of October 19, 1889. In 1891, Prof. Allen J. Smith, observed branched forms of tubercle bacilli in human sputum. Since then Prof. Klein, Herren Fischel, Mafucci et al, have described the branching of this germ. In the summer of 1892 I observed the bacillus in this cycle of life in the liver of the Green Jay of Mexico, *Xanthoura luxosa*. This discovery, coupled with my observations of 1889, and corroborated by the statements of other scientists, must now compel the the bacteriological world to recognize a more complex form of the tubercle bacillus than that observed by the great German bacteriologist in 1882. Since the discovery of the branched form of the tubercle germs in 1889, I have been able to continuously reproduce them on artificial mediums. While the young germs seem to be quite simple in form, appearing in straight rods and rods bent upon themselves, those which have arrived at the age of four weeks, particularly in the presence of an excess of glycerin and in a temperature of 40° C., become branched. The young bacilli, when introduced into the animal tissues produce tuberculosis, while the older cultures gradually lose their virulence, in all probability owing to their inability to reproduce themselves. This fact indicates that the branched form represents an involution life-cycle of the germ. Notwithstanding the fact, however, that the devitalized, dying or dead bacilli cannot produce consumption, they, with their products, effect a decided increase in tubercular inflammation, which inflammatory process even results in necrosis of the tissues. These phenomena led to investigations proving the correctness of the hypothesis first published in my Monograph on Immunity (*Medical News* of Oct. 19, 1889) to wit: "It is possible that by a thorough filtering out of bacilli from tuberculous material, a filtrate might be obtained and attenuated so that by systematic inoculations a change might be produced on living tissues that would enable them to resist virulent tubercle bacilli.

In this line of experimentation I proved that the presence of the germs was not necessary to produce the hyper-inflammatory condition of the tuberculous tissue but that it was a *product* of the bacillus that caused the reaction upon

the tuberculous animal tissues. This, since called *Tuberculin* and introduced into the human economy for the purpose of curing tuberculosis when introduced into animals suffering with artificially produced tuberculosis, often destroyed the condition called consumption and in many cases appeared to produce immunity to the poison of tuberculosis." The process, however, was not quite so successful in animals which had contracted tuberculosis through one of the natural channels. In these cases tissues surrounding that which was recognized as tuberculous afterwards became infected with consumption. While this was and still is discouraging we have good reason to believe that *Tuberculin* will be permanently established as a remedy for this pathological condition. The toxic albumose causing inflammation of tissues markedly tuberculous, coupled with the fact that it is found in such tissues, led me to inquire whether or not some other constituents of animal tissues, pathological or normal, would produce reaction if introduced in excess into the general circulation. This line of experimentation was begun by first using an albumose of the goat, a comparatively immune animal. This material, however, if at all active as a remedial agent in tuberculosis, is so slow in its effects that I have heretofore failed to produce any marked changes. When, however, in the course of my investigations I overloaded the animal system with some of its waste products, Dr. William L. Zuill, M. D., D. V. S., who has kindly carried on the clinical work on animals for our Bacteriological Laboratory reported in THE TIMES AND REGISTER of September 26th, 1891, a reaction by the Amide group on inflammatory tissues, the animals experimented on being tuberculous. As this group included that which we believe to produce the inflammation of gout, I was led to review my experience with tuberculosis in relation to lithemia. Studying this field with the lithemic and tuberculous habits in view I was soon impressed with the fact that when these diseased conditions were present at the same time in any individual we could claim it to be an exception to the rule.

To determine the special action of the Amide group upon inflamed tissues when introduced into the circulation, a case of Lupus vulgaris was selected and first treated by the subcutaneous introduction of .03240 gm. of kreatinin, alternated twice weekly with .130 gm. of taurin, urea and uric acid. The average temperature during treatment was slightly raised, though not to any very marked degree, under the influence of such small doses. The more recent patches of lupus, however, became markedly inflamed, being accompanied with a burning sensation. On the third day after the first injection, a marked granulation could be detected around the outer edge by the aid of a strong amplifying pocket glass. This apparently healthy granulation has continued for ten days, in which time the patch has one half of its original area healed. The result shown at this early stage of the experiment is sufficiently encouraging to warrant not only a continuation of the treatment in this case but in other forms of tuberculosis. The only other subjects upon which these injections have been tried have been cases of pulmonary tuberculosis in a very advanced stage, where there was too much lung-tissue already destroyed to warrant the expectation of a favorable result. The fact that we apparently have an action on the lupus and no marked result with *small* doses on advanced cases of pulmonary tuberculosis causes me to realize that the line of experimentation must not be confined to tuberculous inflammation, but extended to the action of these organic substances on the entire group of inflammatory growths, the effect being produced, possibly, by supplying that in which the pathological tissues are deficient. This line of inquiry, which had its origin in the Bacteriological Laboratory of the Academy, has opened up a new and wide field of important scientific medical investigation. The main object of this communication, at this time, is to confirm the original discovery of the *branched form* of the tubercle bacillus by recording the observations of the same life-cycle of that micro-organism found in animal tissues. I have, however, ventured to advance theories and results regarding the action of substances far removed from the bacillus, because they were suggested during my studies of the branched form of that organism.

[1] From the Proceedings of the Academy of Natural Sciences of Philadelphia, February 21, 1893.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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THE MILK BILL.

THE bill now before the Pennsylvania Legislature for the regulation of the milk supply, presents some features that demand more than a passing notice. That any legislation tending to secure purity and excellence of this product is commendable, needs no demonstration; but it is seriously questioned whether the present bill is calculated to do this. The Philadelphia Milk Exchange has protested against it, denouncing the proposed Act as oppressive, unwise and discriminating. We will look at the bill in detail, and see whether this language is warranted.

The first section provides that all producers and dealers must procure a license. This places upon every farmer who desires to sell milk the tax of a license fee, as well as on every vender. It also creates a new and numerous class of officials, in the shape of inspectors, to be supported by the community.

Section 2 provides further that no producer or vender shall offer for sale or have in his possession any milk coming from an unlicensed producer or vender. This seems to shut out completely the product of the Jersey dairies, unless that State passes a similar law. As there is no qualifying clause as to the knowledge or ignorance of the vender, he will be compelled to decline any milk offered, unless the farmer carries his license to market with him; and even then the vender is liable, as the licensed farmer may sell the customer milk that has come from unlicensed herds. The vender is, therefore, compelled to rely on the honesty of the producer, and by so doing puts himself in danger of violating the law; though guiltless of wrong intent and powerless to avoid the wrong-doing through any exercise of forethought.

Section 3 extends the liability to employees.

Section 4 provides for penalties for infraction of this law. These consist of fines, up to $500, and imprisonment up to one year, with the utter ruin incurred by the publication of the sentence in the newspapers. And all this liability is incurred by *unknowingly* having in possession a pint of unlicensed milk! Should the law pass in its present form, there will be some milk routes for sale.

Section 5 places the appointment of milk inspectors, analytical chemists and dairy inspectors, in the hands of the Director of Public Safety, the local health boards, or the burgess, with as many assistants as the appointing power considers necessary. The chief dairy inspector must be a vet. or a doctor of medicine, and he may hold both inspectorships at once. Salaries are to be fixed by the mayor and councils, or the burgess and aldermen.

The value of such a privilege of unlimited appointments in case of a close

election is at once apparent. Ward primaries could be readily regulated by the appearance of a few hundred extra "milk inspectors."

Section 6 forbids, under heavy penalty, the sale of skimmed milk under all circumstances, whether alone or mixed with whole milk, whether sold as whole milk or simply for what it is; also milk from cattle fed on distillery products or from diseased cattle, or milk not up to the legal standard. Just why the people should be deprived of the privilege of buying skimmed milk if they want it is not easy to determine. Invalids for whom skimmed milk has been prescribed, as in Mitchell's diet for Bright's disease, must get a special permit to live, we presume.

Section 7 prohibits the sale or possession of condensed milk that has less than 25 per cent. of fat, or of milk that has less than 12½ per cent. of milk solids of which at least 3½ per cent. must be butter fat.

Section 8 places the officials appointed under the act under the control of the local health authorities.

Section 9 empowers the officials to take samples for testing.

Section 10 orders licenses to be taken out, within thirty days after the appointment of an inspector, for each place of sale or storage and for each vehicle used for such purpose. The premises must be inspected and their hygienic condition approved before the license is issued. The license may be refused or revoked by the authorities for violation of the law. The license fee for store or dairy is ten dollars per annum, and for each vehicle five dollars per annum.

Section 11 places the officials, in places where there is no local health board, under the control of the State Board of Health.

Section 12 gives to the officials the right of entry as far as needed to carry out the law, directs them to report promptly, and to examine from time to time all milch cattle for tuberculosis or other infectious diseases.

Section 13 provides that any diseased animal must be segregated, and prohibits the sale of its milk or flesh under penalty.

Section 14 appropriates $50,000 for the purpose of carrying out the Act; and also provides for valuing and paying for any animal condemned as tuberculous, the limit of value being placed at $40. If the animal when killed proves to be tuberculous, one third the assessed valuation is to be paid the owner. If the autopsy shows the diagnosis to have been wrong the whole sum is to be paid the owner. This extraordinary provision gives the inspector the right to slaughter the most valuable animals on suspicion, the State paying $40 each if no infectious disease is found.

Section 15 orders the registration of dairies within thirty days after the appointment of an inspector, the fee being $1.00.

Section 16 directs the name and registry number to be affixed to every milk can and vehicle.

Section 17 forbids interference with the inspector, and counterfeiting his seal; while the last section gives June 1, 1893, as the date at which the law goes into operation.

As a whole, the bill appears to us to be objectionable in many points. It renders the dealer criminally liable for circumstances over which he can have no control. This will tend to place the business in the hands of the less scrupulous dealers; to the detriment of the consumers. It will greatly limit the supply of milk, as but a small portion can be furnished at the legal standard.

Whenever the milk of any dairy falls below the standard, it must be destroyed, as the bill forbids its use, even for animals.

The supply will then be variable and uncertain, as any dairy is liable to find its milk occasionally below the legal limit. This, and the expense incurred by the provisions of the bill, must vastly increase the cost of milk to the consumer. The total prohibition of the sale of skimmed milk and of buttermilk has no warrant whatever in public policy. Both these are valuable and wholesome articles of food; and their use meets with no objection that cannot equally be urged against the use of milk and its products in every form. The provisions for slaughtering suspected cattle, place in the inspector's hands the power of destroying the most valuable herds, with no compensation worthy of the name; a power that may be used to gratify private enmity or to favor extortion. The provisions for the appointment of inspectors places in the hands of a few officials a privilege of enormous efficacy in practical politics, but equally objectionable to the interests of the community. The whole measure is calculated to foist upon the consumers, the farmers and the dealers in milk equally, a burden that neither class could bear; and we will be greatly surprised if a Pennsylvania legislature can be found that will impose such a law upon its constituents.

While several cities contested for the honor of Homer's birthplace, this practical age sees three cities competing for the acquisition of Professor Osler as a citizen. Jefferson Medical College made the most strenuous efforts to induce him to take the chair vacated by Da Costa; Montreal is now actively endeavoring to coax him back to McGill University; and Baltimore shows no trace of a disposition to part with him.

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FOR COUGH.—BLOOD PURIFIER.

PLEASE send me a good formula for coughs in general. Also one for purifying the blood. Let them not be too expensive. E. CHRISTIE, M.D.

MICCOSUKIE, FLA.

[For coughs: To one pint wood-tar water, cold, add two ounces fresh wild cherry bark. Macerate for a day, and then let the patient take an ounce whenever needed. As the liquid is used, fill up the bottle with cold water.

For the blood:—

℞—Sodii sulphatis . . . . . ℥j
Sodii salicylatis pur . . . . ℥ijss
Sodii iodidi . . . . . ℥jss
Syr. sarzae . . . . . q.s. ad Oj

M. S.—℥ss in one-half pint hot water, one hour before each meal.]

PECULIAR EPIDEMIC IN KENTUCKY.

WE are in the midst of, I had almost said, an epidemic, of—I don't know what. I shall give you the symptoms, and they are very few, and let you judge. We have had a very severe winter, and now, at its close, of course catarrhal troubles predominate; this as an explanatory introduction of some of the symptoms. The patients are all taken with high fever, 103° to 105° Fahr., cough, dry, or slight mucus, headache; *the chain of lymphatics just posterior to the sterno-mastoids on both sides enlarged and painful;* pulse in ratio to temperature; while the bowels, urinary organs, throat, lungs, liver, spleen, and, in fact, all other organs perform their functions perfectly. There is slight congestion of the bronchial mucous membrane, and this is all I find to account for the cough.

The cases recover slowly, with a disinclination of the lymphatic swelling to go down. The tongue is clean, or only slightly furred. What causes those lym-

phatics to swell? My treatment has been tr. aconite, and sodium salicylate, with ichthyol ointment to the swollen glands. Can you suggest something that would hasten recovery?

We have in Marshall County, some seventy-five miles south of us, an epidemic of cerebro-spinal meningitis. Our Secretary of Health has ordered an investigation (by Dr. McCormick, of Bowling Green); and should the disease prove the so-called spotted fever, I have an idea of going down to try the effect of full doses of pilocarpine muriate. They have had about fifty deaths, and the people are getting terror-stricken.

R. H. C. RHEA, JR.

MORGANFIELD, KY.

[The glandular affection is peculiar, and is not described in any work at our command. The absence of bronchial, splenic, and lymphatic symptoms is characteristic of epidemic meningitis, according to Ziemssen. The high fever at the onset distinguishes this affection from the typhoid group; and were it to be placed here, we would find it occurring with typical typhoid cases, as an occasional variation. Altogether, we must look on this singular epidemic as a manifestation of influenza, modified, perhaps, by some local influences of which we have no knowledge. The glandular disease is due to either a vital or a chemical irritant; in either case derived from the surface whence lymphatic vessels proceed to these glands. A microscopic examination of the bronchial secretion, and of blood drawn from an enlarged gland, might afford some interesting information. In ordinary enlargement of lymphatic glands, we have found phytolacca, locally and internally, quite efficient; and would suggest its employment in these cases. Peroxide of hydrogen might also be applied to the respiratory and mucous membrane by means of an atomizer.—ED T. & R.]

Book Notices.

HAND BOOK OF INSANITY. By Dr. Theodore Kirchoff, Physician to Schleswig Asylum and Privat Docent in Kiel University. Published by Wm. Wood & Co., N. Y., 1893.

This is a well issued manual in clear type and with many most excellent features in the text, with some defects. The book is about equally divided between general and special parts, the latter being the more valuable, as the former is somewhat prolixly speculative on many points, though possessing evidence of much thinking and research.

Germanicisms are not sufficiently eliminated by the translation, but some German terms for which there are no English equivalents are properly retained. He is right in objecting to naming insanities according to the age at which they develop, but he errs in extending his objection to hebephrenia, for the very definite clinical symptoms it exhibits, combined with the puberty period at which it appears, fully justify the term, which by some alienists is also known as pubescent insanity. Senile dementia is also characteristic in its unvariable phases, though the mistake is often made of diagnosing many of the other insanities, to which the old are as liable as the young, as senile dementia, when they are merely mania, melancholia, etc., occurring in an old person.

He regards the criminal as merely a revert to the savage stage, and as on a par with others who have faults of development, such as are found in the insane and epileptics, in which he is justified by the Italian school; but as to genius being dependent upon a neurosis he is behind the times, for every mental gauge including mediocrity could be thus considered by the same reasoning. Goethe, Shakespeare, Bacon, were not neurotic, and the fact that Sam Johnson and others were so, is about as much to the point as that a large proportion of our fellow human beings suffer from rheumatism, gout or some other disease. Neuroses may afflict the highly intelligent as well as others, and not be either a cause or effect of such superiority.

Kirchoff rightly deprecates the faulty training of children, especially the rote teaching in schools (instead of developing their reasoning faculties), as mentally debilitating; but his statement that brain workers are more endangered than those who do manual labor is far from correct. He cites artists as especially liable to insanity. If this is the case, which I doubt, it must be due to emotional overstrain rather than brain work. The eternal dabbling with mythological conceptions worthy of a puerile age, "the divings after the unfathomable and soarings after the infinite," in which so many *uneducated* artists indulge, might foster the hysterical disposition; whereas the scientific painter or sculptor who has mastered, as part of his studies, Darwin's "Expression of the Emotions in Man and Animals," will understand the futility of

trying to portray expressions that never existed, and a little zoological knowledge would disgust him with such impossibilities as hexapod mammals, the monstrosities of centaurs and winged humans.

He says: "The absence of an occupation is also an efficient factor, as is illustrated by the frequency of insanity among tramps." As a rule, this is mistaking effect for cause. The tramp is without occupation all too often because he is insane, rendered so by heredity, disease, drink or other misfortune.

His discussion of the influence of disturbed sexual functions is good, but with regard to alcoholism he is quite uninformed, as he could learn from the writings of Clouston, Crothers and others.

He states that love disappointment seldom produces permanent mental disturbance except upon an hereditary basis, but he overlooks that in this respect it is on a footing with any other exciting cause. Some natures can cope with "hell, death and the devil" and come out right end up, while others tumble to pieces if they fall over a straw.

He deals with paranoia and paretic dementia quite fully and satisfactorily, and handles the treatment of insanity in general much better than does the average text book.

The experienced alienist will read the special part of Kirchoff's book with appreciation, but also will note many omissions. Atheromatous insanity, hebephrenia and several other psychoses are not treated of, while such ailments as stuporous and confusional insanities are described under misleading though old names of primary dementia.

On the whole, Kirchoff's work is an interesting addition to our psychiatrical literature, but does not come up to the standard of completeness of Krafft-Ebing, Spitzka or even the antiquated Griesinger.

S. V. CLEVENGER.
70 STATE ST. CHICAGO.

Celebrating the beginning of its twelfth year, the *Electrical Review*, of New York, published on February 25 a particularly interesting and instructive issue of nearly 70 pages. We quote the following from the introduction to a handsomely illustrated and well written description of the progress made in all branches of electricity during the past year:

"While the year which closes with this number of the *Electrical Review* has not been characterized by the production of any of the marvels in which the electrical prodigy has been so fruitful, it bears evidences of a steady march of improvement, signalized by the introduction of more perfect apparatus and an expansion of the field of application for electrical inventions the birth of which occurred at an earlier date."

Other valuable articles in this number of the *Electrical Review* are a description of the largest arc lighting plant in the world; an interview with Prof George Forbes, the great English electrician, in which much information about the transmission of electric power from Niagara Falls is given; "The Inventor," by Julian A. Moses, a very interesting description of the present status of "The Telephone," by Grosvenor P. Lowery, the celebrated patent attorney; "The Place of Electricity in the Modern Office Building," by an office building manager; "A Combination Electrode and Stand for Use in Static Electric Treatment," by Dr. Lucy Hall-Brown; "A Visit to the World's Fair," by Stephen L. Coles, and "The Durability of Underground Wires," by Herbert Laws Webb.

Society Notes.

NEW YORK ACADEMY OF MEDICINE.—SECTION ON ORTHOPÆDIC SURGERY.

[Stated Meeting, January 20th, 1893.—Henry Ling Taylor, M. D., *Chairman.*]

REFLEX SPASM ON "POINT PRESSURE."

DR. R. H. SAYRE presented a boy with congenital infantile spastic paralysis, in order to illustrate what he understood by contractured tissues, and by reflex spasm on "point pressure." This child had been seen by a number of gentlemen who had stated that nothing could be done to relieve his condition, yet the speaker was of the opinion that by proper treatment the child's condition could be improved sufficiently to enable him to walk without mechanical aid. He then demonstrated the existence of spasm

when "point pressure" was made on the contractured tendo Achillis. In his experience, the condition of such tendon was only made worse by stretching, yet tenotomy and the subsequent use of massage, galvanism, and faradism, will cause a decided improvement. He had seen cases in which spastically contracted muscles could be elongated sufficiently to allow of placing the parts in the normal position without producing reflex spasm, and in such, of course, tenotomy is not required. Thus, in a boy twelve years of age, who had been for a long time utterly helpless, he was able, by carrying out this line of treatment, to improve his condition materially, so that the boy could walk about the room now, and clothe and feed himself. He was not prepared to state just how tenotomy affected the condition of those muscles in which this reflex spasm was elicited, but it served to place the nervous system in such a condition that the patients were better able to co-ordinate, not only these muscles, but other muscles in the body.

The Chairman said that in previous discussions on this subject, he had not noticed any distinction made between cerebral and other palsies. In the case presented, the spasm elicited on point pressure might be one manifestation of the heightened reflex activity present in cerebral paralyses. Such deformities could often be temporarily overcome by stretching, but most orthopedic surgeons were agreed that most cases required tenotomy for their permanent cure.

Dr. R. H. Sayre replied that it was not claimed that this sign would enable one to differentiate between infantile spastic paralysis and anterior poliomyelitis, but as a result of observations on cases which had been stretched for periods varying from six months to three years without success, his father had found these cases invariably showed reflex spasm on "point pressure" when the tendons were placed on the stretch, and he claimed that all such shortened tendons, whether as a result of spastic paralysis, or of spinal paralysis, could only be permanently benefited by *division* of the tendon.

The Paralyses of the Sphincters in Pott's Disease.—A paper on this subject was read by Dr. Halsted Myers,

Pott's Paraplegia.—This was the subject of a paper read by Dr. R. H. Sayre.

DISCUSSION.

Dr. H. W. Berg said, that the value of Dr. Myers' paper consisted in the aid which it rendered in localizing the lesion of Pott's paraplegia. Some years ago he himself formulated a theory which he had thought would render assistance in the same direction. He divided the cases in which the bladder was involved into two classes, those exhibiting "conscious incontinence" of urine, and those showing "unconscious incontinence" of urine. From the existence of two opposing sets of muscles in the bladder—the detrusor and the sphincter—he argued the probable existence in the bladder or rectal centre of a separate set of motor cells for each of these sets of muscles. In order to be conscious that the bladder is becoming filled with urine, the sensory nerves of the bladder must carry this information up to the brain; hence, in addition to the reflex act of the centre itself, there is a voluntary control over all these muscles exerted by the brain through these centres. Now, a lesion may paralyze either the motor cells or the sensory cells of the centre; in the former case, there is a conscious incontinence, in the latter, unconscions incontinence. Again, any lesion involving the set of fibres passing from the sensory portion of the centre through the posterior portions of the cord of the brain, will be followed by unconscious incontinence of urine, while any lesion pressing upon the anterior or lateral portions of the cord will cause conscious incontinence of urine.

Dr. Royal Whitman said that the distinction made by Dr. Berg, as showing the existence of pressure at one or another part of the cord, could be of but little practical importance, as the pressure to be removed by operation was almost allways on the anterior aspect; an extension of the disease from the bodies of the vertebræ. It was also to be remembered that simple pressure was not the only element in the paralysis, for in many cases there was but little actual pressure, but rather an implication of the coverings of the cord in the extension of the tuberculous disease, causing, by interference with the circulation in blood vessels and

lymphatics, nutritive changes and subsequent degeneration.

In certain cases, paralysis was a very transitory complication ; in others, it was never or only partially recovered from. This difference might be explained in the one instance by simple pressure, in another, by the more serious implication of the coverings of the cord, with nutritive changes, or by inflammation and destruction of the elements by the tuberculous process. In considering operative interference, it would be important, if it were possible, to make out more accurately the extent of the disease, and the actual condition of the cord itself, as certain advanced cases must be hopeless from any point of view, while simple pressure as for example from abscess, as in the case mentioned by Dr. Myers, might be relieved by operation at an early period, with good result. Although recovery from the paralysis of Pott's disease might be confidently predicted in the great majority of cases under conservative treatment, this recovery was not always perfect. A certain amount of weakness and spastic rigidity might persist indefinitely. He could recall the case of a girl, now fourteen years of age, who had recovered from seven distinct attacks. She was now, two years after the last recovery, walking about, although there was still well marked spastic contraction of the legs. Her condition was, however, gradually improving.

Dr. Frederick Peterson said that the neurologist looked upon the paraplegia of Pott's disease as the most favorable of all organic spinal disorders, as a very large percentage recovered. It was very curious that cases which presented the marked symptoms ordinarily considered to be due to secondary degeneration in the cord, should, after the lapse of a year, recover entirely under conservative treatment. He agreed with Dr. Sayre that operative treatment should be only a last resort. He had been particularly interested in the cases reported by Dr. Shaffer, in which there had been a cessation of menstruation. It is well known that there is in all probability a parturition and a menstruation reflex centre in the lumbar region of the cord, but the process by which the cessation of menstruation was produced in these cases, is rather difficult to explain. Regarding the relative value of motor and sensory symptoms in determining the prognosis, he said that the paraplegia is due to compression or an inflammatory process, or to a combination of the two and that where the sensory symptoms are marked, the prognosis is not so good. This is because the motor functions being represented probably nearer the periphery of the spinal cord, they are the first to suffer when the Pott's disease is mild in character. When the compression becomes very great, then the sensory symptoms develop. Hence, the sensory symptoms are an important index of the extent of the lesion, and of great value in assisting us in making a prognosis.

Dr. Samuel Lloyd said that Lauenstein's rule, to which reference has been made in Dr. Myers' paper, was formulated for fractures of the spine, and was never intended to apply to Pott's disease. In the former class of cases, the rule undoubtedly was valuable, but it had been conclusively proven by a study of the cases of Pott's paraplegia which he had published in October that, it was inapplicable to this latter class. In Pott's paraplegia, it has been demonstrated clinically that incontinence may be present for a considerable period, and yet decided improvement would follow conservative treatment. It was stated in the paper that shock was one of the causes of incontinence. This is undoubtedly true, but shock in Pott's disease can only occur when the disease has advanced so far that there is a sudden dislocation, or where there is a rupture of an abscess into the spinal canal; shock such as this would hardly produce a lasting incontinence unless some permanent compression was caused by the accident. This had been shown in the cases of fracture of the spine which he had tabulated about a year ago, where it was proven that the cord recovered promptly and progressively from shock unaccompanied by any laceration or compression of the cord.

Regarding the overflow incontinence and the incontinence of the empty bladder, the speaker said that it was pretty well established that in cases of irritation of the cord where cerebral control is still present the reflexes are increased, and

this may easily lead to increased sphinteric action, and in that way to overflow. This would indicate the early stages of cord interference, and the fact that the pressure was as yet very slight, and not sufficient to shut off the cerebral control. On the other hand, where there is complete suppression of the urine, with paraplegia and anæsthesia, the indication is that the pressure had become so extensive as to abolish cerebral control, and hence, the reflexes also. He thought all could assent to the statement made by Dr. Sayre, that it was only in very exceptional cases that operation is indicated. Chipault, who has carefully reviewed this subject, comes to the same conclusion, and emphasizes the importance of constant mechanical treatment after operation, a point which has been very generally neglected. The large number of deaths recorded in the table which the speaker had himself published, could be explained by the fact, that many of those operated upon were cases in which there was degeneration of the cord; in other words, cases now considered unfit for operation.

Dr. Joseph Collins referred to a case of extensive meningo-myelitis with descending degeneration of the anterior and crossed pyramidal tracts, in which operation had been done, and very properly, for there was no reason for supposing in this case that the cord could be regenerated when the degeneration was so extensive. The patient died of septic pneumonia a few days later. Many neurologists to-day do not believe that there is any such thing as acute transverse myelitis, cases formerly going under this head, being considered as really instances of pressure myelitis. The first lesion is a meningo-myelitis, and not a simple anæmia of the cord. Indeed, the fact that the vessels of the spinal cord, one hundred and fifty to two hundred in number, are so small as to be nearly invisible to the naked eye, makes it highly improbable that anæmia could possibly cause the symptoms found in the early stage of Pott's paraplegia. The speaker endorsed what had been said about the inadvisability in most cases of resorting to operation. He thought it absurd to suppose that ergot or ergotine could cause sufficient contraction of these minute blood vessels to sensibly overcome the hyperæmia. If these preparations have any action at all on the blood vessels, it is to interfere with their nutrition, and, hence, with the regeneration of the affected fibres, and are, therefore, to be avoided. He wished to protest therefore against this very common method of treatment. Dr. Berg's theory, a modification of that presented by Gowers, was, in his opinion, unnecessarily elaborate. We know that in the lumbar cord there is a centre for the preservation of the tonus of the muscles in the lower extremity, which exerts a similar action on the bladder. There is also a centre for urination. In his recent paper on myelitis, there were cited cases of acute ascending paralysis with lesions of the posterior columns, and yet the bladder remained unaffected. In connection with the cases narrated by Dr. Schaffer, it was well to remember that it is claimed there is a menstruation centre situated opposite the eleventh or twelfth dorsal vertebra.

Dr S. Ketch referred to the case of a boy who had been under observation for over five years, and who had had paraplegia during the greater part of this time. Up to last summer, it was complete as regards the motor symptoms, yet there had never been any urinary or rectal incontinence. He had been under strict mechanical treatment all the time, and last summer he had improved sufficiently to walk a little. At present, the reflexes are still exaggerated, and there is slight ankle clonus. Orthopedists in general hold the opinion that operative interference should be a last resort in these cases, and the propriety of this view was well shown in his case which he was sure would long ago have been submitted to operation by the advocates of laminectomy.

Dr. Berg said that in his remarks on the two forms of incontinence, he had not stated that such cells as he described, actually existed, but the symptoms observed were most easily explicable on such a theory. He would like to ask Dr. Sayre how often he had seen paraplegia before the development of the kyphos.

Dr. Anna M. Galbraith said that she had had one case of incontinence, due to inactivity of the lumbar centres, of four years' duration, which finally, under suitable treatment, terminated in complete recovery. Where electricity did harm,

there was probably an acute inflammation, which is always a contra-indication to the use of electricity.

The Chairman said that Dr. Lovett and himself, in a paper which they had published in 1886, were among the first to call attention to the comparative benignity of Pott's paraplegia under proper mechanical treatment.

Dr. Myers, in closing the discussion on his paper, said his cases showed that the connecting fibres between the brain and the reflex centres could resist pressure severe enough to practically abolish their function for a long time. He had had a recovery from paralysis of the bladder and rectum of four and a half months' duration, under conservative treatment, and had notes on two such cases cured by laminectomy after six months, and another history read as if the cure was gained after eighteen months.

The highly organized reflex centres themselves were only once affected, although most severe cases of dorso-lumbar disease were seen. The peripheral segment of the reflex arc had not been interrupted in any of his cases.

Unfortunately too few cases had been carefully reported to enable him to establish the prognostic value of the different varieties of this paralysis. He had never seen paralysis of the bladder and rectum without motor paraplegia, though it was not uncommon without note being made of sensory symptoms; therefore, he thought in the latter cases, the distinction of unconscious and conscious incontinence might be of value as indicating involvement or not of the posterior part of the cord.

In reference to Dr. Sayre's paper, he wished to mention a recent autopsy, where the cord was found compressed at the second dorsal by an extradural abscess, a thickened dura, and from being tightly drawn over the projecting bony angle anteriorly. Had laminectomy been done in this case, not only would this pressure not have been relieved, but there would have been a complete solution of bony continuity here, because the body of the second dorsal was entirely destroyed and the pedicle and laminæ were also affected. Rupture of the cord could not have then been prevented. Weakening the spine had been indefinitely referred to often, but this case showed it was a real danger, and one which could not always be anticipated, as externally this case did not seem a very severe one.

Dr. R. H. Sayre, in closing the discussion referred to the anatomical structure of the spine, and the difficulty of relieving the pressure by operation without removing to a dangerous extent the supports of the spinal column, and said that such measures were of very questionable utility except where it is known to be in the posterior part of the spine. Massage is a very indefinite term, and as often administered will only do harm; yet moderate stretching and gentle manipulation were beneficial in certain cases. The diversity of opinion regarding the utility of eletcricity is explained by the fact that here a large part of our treatment is empirical; whether mechanical, medicinal, or operative. He had seen patients improve under galvanism, and become worse when this was intermitted. In cases of Pott's disease where there was disturbed heart action and a marked involvement of the sympathetic, decided benefit had followed galvanization of the sympathetic. In two of the cases reported, the paraplegia had existed for a number of months before the kyphos was discovered, and in a third, the appearance of the kyphos was preceded by a partial paresis of one leg. He did not see why ergot should not contract small vessels as well as large ones; clinically, it had seemed to him to do good, and he had supposed its beneficial action was to be attributed to a diminution in the supply of blood to the cord.

The Medical Digest.

GERMAN NOTES.

TRANSLATED BY DR. AD. MEYER.
CHICAGO, ILL.

DUBOISINE is recommended by Prof. Mendel in cases of insanity with prominen motor restlessness, to produce relaxation of the muscles and consecutive sleep for two to six hours. He began with ½ mgr. ($\frac{1}{120}$ grain) in hypodermic injection, slowly increasing the dose to 1 mgr. In five minutes the muscles begin to relax and in twenty minutes sleep sets in. In melancholia, in quiet cases of para-

noia and in simple wakefulness it does not produce sleep. Signs of intoxication are: mydriasis and the accompanying disturbance of vision, dryness of the throat and acceleration of the pulse and of respiration, sometimes dizziness; hallucinations were not observed with those small doses. Mendel prefers duboisine in motor restlessness of the insane to the more dangerous hyoscyamine. An attempt in twelve cases of paralysis agitans showed a beneficial influence. In a few cases the tremor was removed within five minutes for about four to five hours, so that the patient could write a letter without much trouble. The dose is from two to four-tenths of a milligramme ($\frac{1}{300}$-$\frac{2}{300}$ of a grain). When given in the evening, it has often a beneficial influence on the sleep by diminishing the muscular rigidity. Patients who were treated with hyoscyamine before, prefer it to this drug. It is useless in epilepsy. —*Deutsche Medicinal Zeitung.*

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Hyperemesis Gravidarum. — Dr. Edward Frank, who has made a very interesting and thorough investigation of this subject, arrives at the conclusion that hyperemesis gravidarum is the consequence of hysteria which existed before or developed during pregnancy. The alteration of the nervous system may be due to the pregnancy alone, or to a disease of the organism, especially of the genital organs The symptoms in the course of the disease are those of inanition. The prognosis is favorable as a rule, if the patients are treated in time. In the treatment we have first to remove a possible organic cause. Pure milk diet with absolute rest in bed will be sufficient in most cases; besides we may use antihysteric treatment, drugs and suggestion. In very serious cases, where the patient comes under treatment too late, artificial abortion can, perhaps, not be avoided. *The nature of the disease cannot be made responsible for a fatal end.—Prager Mediz. Wochenschrift.*

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Prof. Ebstein gives a very interesting paper on the diagnosis of small quantities of fluid in the pericardium, and early diagnosis of beginning exudative pericarditis. He has been led to his investigation by a nearly forgotten paper of Dr. Rosch (Boston *Med. and Surg. Journal*, 1878, No. 13–14). Dr. Rosch pointed out that the first symptom is dullness of the right fifth intercostal space to percussion. Prof. Ebstein has indeed found in forty-nine cases that this is the safest sign for an early diagnosis. The fluid can first be shown by the dullness of an angle formed by the normal dullness of the heart and the dullness of the liver; this angle coincides as a rule with the right fifth intercostal space.—*Virchow's Archiv.*

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Prof. W. Fleiner gives an excellent paper on the treatment of constipation, of the atonic and especially of the spastic form, with large enemata of oil, as used in Prof. Kussmaul's and his own practice. He recommends to take the best olive oil or poppy-oil, and to inject about a pint slowly into the rectum of the patient, who is lying on his back with his pelvis slightly raised. This is best done when the patient goes to bed, because then the oil spreads more easily over the whole colon, and the clothes are not so apt to get soiled. If in the morning no stool has been effected, this is obtained by an injection of water or of an infusion of fructus anisi stellati. This is repeated the next days until the oil reaches the height of its action, *i.e.*, causes thin stools containing sometimes undecomposed gall. After a pause of a few days, only a little more than half a pint of the oil will do twice a week, or even once a week. A child requires 2-5 ounces, and 1-2 ounces later on. The advantages of the method are explained by the mechanical and chemical properties of the oil. It softens the fæces by imbibition, detaches them from the walls of the colon, and thus has a sedative influence, besides it prevents the excessive absorption of the water of the fæces, and finally, by decomposition and formation of acids it excites peristaltic motion and evacuation in a mild way. This explains why the method is the most rational treatment of the spastic constipation, caused by fissure ani, or more typically in irritable, neurasthenic patients and hypochondriacs, and in women suffering from disease of the genital organs, where a rather long section of the colon may be in a condition of contracture. In such cases massage and strong pur-

gatives do much harm.—*Berliner klin. Wochenschrift, No. 3 and 4, 1893.*

If antiseptic action on inflammatory or ulcerative process should be desired, 1-2 per cent. of salicylic acid may be added to the oil.

GLYCOZONE.

GLYCOZONE is a stable compound resulting from the chemical reaction which takes places when C. P. glycerine is submitted under special conditions, to the action of fifteen times its own volume of ozone, under normal atmospheric pressure at a temperature of O° C.

The presence of water (and other foreign substances) in the glycerine, changes the nature of this reaction, so that instead of producing glycozone, we obtain formic acid, glyceric acid, and other secondary products having deleterious effects upon the animal cells.

Glycozone being hygroscopic, must be tightly corked, so as to avoid being deteriorated by the moisture contained in the atmosphere.

Although glycozone absorbs water readily, it does not deteriorate when kept at a temperature of 110 degrees F. as long as it retains its proper anhydrous condition.

The therapeutic properties of glycozone and Marchand's peroxide of hydrogen (medicinal) differ in the following particulars:

Peroxide of hydrogen (medicinal) instantly destroys the morbid elements of diseased surfaces of the skin or of the mucous membrane with which it comes in contact, leaving the tissues beneath, in a healthy condition.

On the contrary, glycozone acts more slowly, but not less certainly as a stimulant to healthy granulations. Its healing action upon diseased mucous membrane is powerful and harmless in the treatment of inflammatory diseases of the stomach. In such cases it gives an immediate relief to the patient.

In chronic inflammation of the intestines, a rectal injection administered every day with a mixture composed of

℞ Glycozone, ... ℥1
Lukewarm water, . . . ℥12

soon relieves obstinate conditions.

A syringe made exclusively of hard rubber or glass, should be used in all instances where either peroxide of hydrogen (medicinal), or glycozone is used as an enema.

After any diseased or suppurating surface has been cleansed by peroxide of hydrogen (medicinal), the application of glycozone stimulates healthy action, and accelerates a cure.

General directions for use.—Glycozone may be given for diseases of the stomach, in doses of one to two teaspoonfuls in a wine-glassful of water immediately after each meal. In catarrhal diseases, it should be applied in full strength as often as required.

As an application to wounds and suppurating surfaces it should be used without dilution.

Caution.—Glycozone is a peculiar chemical compound, and not a mixture of peroxide of hydrogen (medicinal) with glycerine.

These two liquids when mixed do not form a stable product, but develop substances which have injurious effects upon animal cells.

Such a mixture when freshly made, has no healing properties similar to glycozone. On the contrary glycozone is stable, harmless and always effective.

In *The Practitioner* for January, Wilks contributes a paper on the value of drugs, that is well worth reproducing, had we the space. He objects to the indiscriminate use of the bromides, except in epilepsy, they are of little use. Business anxiety, domestic anoyances, love, whose course will not run smoothly, all are alike treated with bromides. It is also unscientific to persist when a remedy has proved valueless, as in the routine methods for phthisis. Because syphilitic periostitis is amenable to iodide, all bony growths are to be treated by it; though it has no power over them. Splenic leucocythemia is treated by quinine, mercury and iodides, in and out, though these have not the slightest effect on the enlargement. In tuberculous (sic) meningitis the iodide is also given, though without a single cure to its credit

On the other side, among undoubtedly beneficial uses of drugs, he enumerates the cure of exophthalmic goiter by bella-

dona ; idiopathic anemia by arsenic ; tuberculous peritonitis by good living, milk, wine, quinine, tonics, cod-liver oil, and iodides and mercury to the abdomen, with tincture of iodine ; and dysentery and chronic diarrhœa by mineral acids and ipecacuanha, with, perhaps, a little opium.

In the same number of *The Practitioner* are interesting papers from Sir Dyce Duckworth on sick diet, Haig on intestinal gout, Morison on passive congestion of the lungs from heart failure, and McCall Anderson on the treatment of myxœdema. In the section devoted to public hygiene, the question of public water service in relation to enteric fever is considered ; Fox writes on softened *versus* hard water, and Huggard gives some useful hints to patients concerning the spread of consumption.

News.

CLINICAL SOCIETY OF MARYLAND.

BALTIMORE, Jan. 20th, 1893.

The 275th regular meeting was called to order by the President, Dr. William E. Moseley.

Dr. Harry Friedenwald exhibited a case of exophthalmos due to idiopathic hemorrhage into the orbit. One morning the patient, a robust negro man, arose feeling quite well. After washing he felt a sudden pain in his eye and found the eye protruding and sensitive. The eye-ball was not at all injected and the only reason for the exophthalmos that could be assigned was an orbital hemorrhage. The movements of the eye-ball were very much restricted. During the next two days the pain was greatly diminished and the movements were increased. The vision of the affected eye has been greatly impaired since the hemorrhage. No blood had yet appeared under the conjunctiva. There are a very great number of cases reported of traumatic orbital hemorrhage with the same symptoms but there are only a few cases of idiopathic hemorrhage on record. The patient's history throws no light upon the cause of the hemorrhage.

Dr. A. Friedenwald remembered a similar case which he had seen in a colored man some years ago. The protrusion of the eye-ball came on very suddenly and could be ascribed to no other cause than orbital hemorrhage. These hemorrhages are by no means innocent, for the pressure which they exert upon the nerve of the eye is very prejudical and explains the rapid decrease in the patient's sight. In traumatic cases an accumulation of blood in the orbit is usually followed by total atrophy of the optic nerve.

Dr. S. T. Earle exhibited a Langdon Rectal Tube. This tube was introduced by Dr. Langdon of the Miami Medical College of Cincinnatti, Ohio. It presents many advantages over the tube ordinarily in use It is five feet in length, being intended to reach from the anus to the caecum. It is found extremely valuable in rectal alimentation as the enemata can be carried up all the way into the large bowel and is not followed by a desire for speedy evacuation as in the case when the nourishment is injected only into the rectum. The enemata by this means come into contact with a larger absorbing surface. Another advantage of this tube is its resistance. It is a ½ inch tube with only a ⅛ inch opening. This prevents the kinking and bending upon itself which is so likely to take place in in the ordinary rectal tube. The opening is at the end and not upon the side. This allows of an easy introduction, as by letting the enemata flow in gradually the bowel is distended in advance of the tube. In cases of fecal impaction this resistance and direct opening are of very decided advantage. This tube can be made to pass the fecal impaction and throw the enemata above the instruction. It is also valuable in the treatment of oxyuris vermicularis. It has been shown by Heller that the habitat of this worm is about the caecum and not about the rectum as has been supposed. By this tube our medicaments can be thrown where they will do the most good.

Dr. Robert W. Johnson related "A Dozen Accident Cases Treated by the Blood-Clot Method :" Three gun-shot wounds, two compound fractures of the skull, two compound fractures of patella, one compound fracture of tibia, one compound dislocation of elbow, one punctured wound of knee-joint, one plastic amputation of breast, one strangulated testicle.

These cases were all eminently successful. They did not represent all of the series of cases treated by this method but only the most successful ones. While the method is not universally successful, still it may often be trusted and when it fails it does not leave the patient in a much worse position than had it not been tried.

Dr. W. S. Halsted congratulated Dr. Johnson upon his cases and thought they were excellent illustrations of what could be done by the method.

There is a point that is not generally understood when the blood-clot is spoken of. Schede, who advocated this method, made use of it to fill up dead spaces in bone to take the place of sponge, decalcified bone, catgut and other foreign materials, and he contradicted the views of Bergman who thought it was absolutely fatal to good results to allow blood to remain in the wounds. He did not, however, ascribe any beneficial antiseptic effects to the blood-clot. He did not know at that time of the experiment sof Nuttall, and of others since Nuttall, which showed that the blood of some animals has the power to destroy germs, such as the typhoid germs, when inocculated with these germs. No one has yet succeeded in killing pyogenic organisms with human blood.

Perhaps the value of the method lies in the fact that we are no longer afraid of blood in a wound and so we do not feel anxious to obliterate dead spaces which are difficult to obliterate and we do not have to prevent very minute arteries from bleeding. We have learned that blood is not very harmful in a wound, but we have not learned that it is a thing to be desired in a wound.

It is best to have a wound as dry as possible and to close it immediately, provided we can have it dry without constricting tissues with our ligatures and sutures. We have become sure that one of the most important things in technique is to avoid the strangulation of tissue. This is more important than the employment of antiseptics, more important than disinfecting the skin of the patient and perhaps disinfecting our own hands, but not more important than disinfecting ligatures.

Dr. J. E. Michael said that similar cases to those related by Dr. Johnson had been treated successfully by other methods. There can be no object in having a blood-clot except where there is a dead spot to deal with. Where wounds can be made clean and approximated without constricting tissue it seems reasonable to so treat them than rather than to introduce an element that may be harmful.

Dr. J. W. Chambers: "We have about come to this conclusion, that a blood-clot is probably less injurious to tissue than a drainage tube; that it does very little harm, whether it does good or not."

Dr. Randolph Winslow believed that wherever there are dead spaces, such as cavities in bone which heal with difficulty by the process of granulation and cicatrization, the blood-clot affords a scaffolding by which the process of repair is very much facilitated. He feels safer in making use of drainage where there are considerable cavities which are liable to be filled with fluids which may decompose, but in small cavities or bone cavities it is frequently desirable to have them filled with blood.

Dr. A. Friedenwald: "A blod-clot always forms after the enucleation of an eye. Before the period of antisepsis, he always expected copious suppuration to follow enucleation, and it never failed. With antisepsis he never has suppuration."

Dr. Johnson said that while the blood-clot will not destroy germs, and he had never intended to give the impression that it would, it will allow us to close up our wounds without too much interference. It is nature's method of filling up dead spaces, and is what occurs in subcutaneous wounds and simple fractures. It enables us to do away with the drainage tube to a great extent, and this is an extremely valuable addition to surgery. It makes each operation simpler. In endeavoring to check the hemorrhage of small oozing by sponge or gauze or other means, we do injury to the tissues. We accomplish a good work by the avoidance of this injury.

—

BALTIMORE, Feb. 3d, 1893.

The 276th regular meeting was called to order by the President, Dr. Wm. E. Moseley.

Dr. G. J. Preston exhibited a patient suffering from a peculiar nervous affection of his left arm. The patient, a man of 26 years, has done hard work all his life. He used his left hand rather more than his right. Last October he had a fall and struck on the shoulder and arm of the affected side and the pathological condition developed soon after. The arm is very muscular and there is no evidence of paralysis, no loss of sensation and electric reflex perfectly normal. The patient's hand assumes all sorts of queer positions due to contracture of the muscles and no sooner is one position reduced than another immediately ensues due to the contracture of a different group of muscles. These peculiar phenomena disappear entirely during sleep. Dr. Preston was inclined to believe that the condition was one of hysteria.

Dr. Walter B. Platt read a paper upon the "Factor of Age in Surgical Operations." His conclusions were based upon operations done by himself upon children and aged people. He has never seen any ill effects in children from confinement to bed for weeks and months in hygienic surroundings. They stand confinement to bed and house better than any other age. In them ether anesthesia is quickly induced and consciousness quickly regained. He has never seen any bad effects on the circulatory system during or after the administration of anesthesia.

The only case of shock which he had seen was in a case osteo-myelitis of the femur where a great deal of suppuration had been going on for two or three years. A proportionate hemorrhage is probably better borne by a child than by a adult. Children do not well tolerate an operation where the intestines are long exposed. Old persons having simply the senile changes but being fairly healthy otherwise, can stand operation very well. Confinement to bed is an important matter in old people. If the injury compels them to lie flat on their back, hypostatic pneumonia may put an end to life. They should be watched carefully and propped up if necessary.

Dr. Randolph Winslow reported "Some Cases of Compound Fracture Occurring in Boys."

Dr. J. W. Chambers said that children stand the shock moderately well. He had recently operated on a child in its second week, for double hare-lip with protrusion of the premaxillary. The child was under the anæsthetic for three-fourths of an hour, but there was little or no shock. Children stand loss of blood fully as well as other people. They make blood very rapidly. It is very difficult to say how old people stand shock for the reason that a large number of the old people operated upon are in a pathological condition independent of the condition for which they are operated upon. The tissues of old people heal about as well as those of young persons. If the patient's condition warrants an operation and the heart and lungs and other organs are good the question of age is hardly a factor.

Dr. J. D. Farrar read a paper upon "Intestinal Antisepsis in Typhoid Fever by Means of Bismuth, Subiodide and Salol." He commended the plan in practice at the Cooper Hospital, Camden, N. J. He reported a series of twenty-four cases with no deaths. The bismuth and salol were given in five grain doses, alternately, every three hours, night and day. No toxic symptoms from the drugs were noticed. This method of treatment is begun whenever diarrhœa exists, and is continued throughout the disease. This treatment is thought to modify the severity if it does not limit the duration tion of the disease. Tympanites is reduced, diarrhœa controlled, and hemorrhage prevented.

Dr. Norment said that one of the charts exhibited by Dr. Farrar showed the patient to have had a practically normal pulse, temperature and respiration upon admission, and he thought that the case did not demonstrate so much the benefit of salol and subiodide of bismuth as it did the benefit of convalescence. He thought that further trial was necessary before the utility of the method could be accepted.

W. T. WATSON, *Secretary*.
1519 N. BROADWAY.

The Provincial Medical Journal for February contains a fully illustrated paper by Robert Jones, of Liverpool, and John Ridlon, of Chicago, on hip-joint disease.

PAN AMERICAN MEDICAL CONGRESS.

NEW BY-LAWS.

Languages.—By-Law IX. Papers may be read in any language providing that authors of the same shall furnish the Secretary-General with an abstract not exceeding six hundred words in length in either of the official languages (English, Spanish, French or Portugese), by not later than July 10th, 1893, and providing further, that a copy of each such paper shall be furnished in either of the official languages, at or before the time of the meeting to the Secretary of the Section before which the same shall be read. Remarks upon papers may be made in any language providing that members making such remarks shall furnish a copy of the same in either of the official languages before the adjournment of the session.

Publication.—By-Law X. All papers read either in full or by title shall be immediately submitted for publication in the transactions (Special Regulation 3) but authors may retain copies and publish the same at their pleasure after the adjournment of the Congress.

Constituent Organization.—By-law XI. All medical, dental and pharmeceutical organizations, the titles of which have been transmitted with approval to the Committee on Organization, or which may hereafter be transmitted with approval to the Executive Committee by any member of the International Executive Committee, each for his own country, shall be subject to election to the Executive Committee, approved by the President, as constituent bodies of the First Pan-American Medical Congress, and each organization thus constituted, shall have the right to designate as delegates all of its members attending the Congress, but no such organization shall meet at the time and place of meeting of the Congress as a distinct body. Providing, that the Secretary of each such constituent body shall furnish a list of officers and a statement of the number of members of his respective organization to the Secretary-General, not later than sixty (60) days before the meeting of the Congress, and shall forward a list of delegates chosen to reach the Secretary-General before the opening of the Congress.—*By the Executive Committee, February 22, 1893.*

INFANT FOODS.—It has been quite positively settled that an infant under seven months old cannot digest starchy food. The salivary glands are not yet properly developed, and the secretion of ptyalin, the ferment of the saliva which acts on starch, does not exist until after the above age. It would naturally seem, then, that an all milk food would be the only one to use. As far as I am aware, Reed & Carnrick's Lacto Preparata is the only food of this kind offered to the medical profession or public, and from what I know of its composition, its preparation and the results obtained by its use, I am justified in saying that it is a most excellent substitute for mothers' milk, and is the safest to use during epidemics of typhoid fever, cholera infantum and Asiatic cholera.—Cyrus Edson, in *The Doctor of Hygiene.*

DR. BRUSH'S

KUMYSS

"KUMYSS is, among the Nomads, the drink of all children, from the suckling upwards; the refreshment of the old and sick, the nourishment and greatest luxury of every one."—DR. N. F. DAHL'S report to the Russian Government, 1840.

I WOULD also allude to cases of diarrhœa and vomiting and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on KUMYSS, when the improvement was rapid and permanent. Very truly yours,

ARCH M. CAMPBELL, M. D.

Farm and Laboratory,

Mt. Vernon, N. Y.

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The Times and Register.

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Original Articles.

THE RATIONAL TREATMENT OF BUBO.

By G. FRANK LYDSTON, M. D.

[Professor of the Surgical Diseases of the Genito-Urinary Organs and Syphilology in the Chicago College of Physicians and Surgeons.]

SOME eight or ten years ago I published an elaborate article on the treatment of bubo, in which I reviewed the subject quite exhaustively. I recall with some amusement, the elaborate details of prophylaxis of pus formation which I then laid down. For several years past, my treatment of bubo has become resolved into very simple elements.

These elements are: 1st, prophylaxis of bubo; 2d, treatment of bubo prior to distinct abscess formation; 3d, treatment of suppurating bubo. The means of prophylaxis of bubo may be briefly formulated as: 1st, thorough cauterization of chancroid; 2d, avoidance of irritants and the maintenance of as complete rest as practicable, in all urethral or genital lesions, "specific" or non-specific.

The treatment of inguinal adenitis prior to apparent suppuration, is worthy of most careful consideration. I desire to put myself on record as believing that the ideal prophylactic of pus formation is the early and complete extirpation of the affected glands. I certainly believe it the duty of the surgeon to extirpate the glands in every case in which distinct enlargement occurs and persists for several days in spite of rest and poulticing.

It has been my experience that foci of suppuration form in the affected glands very early in the case. I have seen them on the third day. These foci of suppuration are at first, chiefly at the periphery of the gland and the likelihood of infection of the peri-glandular tissues, is correspondingly great. A focus of suppuration no larger than a pin's head, is sufficient when ruptured, to infect the surrounding tissues. Once these tissues are infected, the surgeon may bid good bye to his hopes of preventing annoying and enduring suppuration. I have seen foci of gelatiniform degeneration of the gland tissue within a few days after the onset of the bubo. This tissue necrosis may be described as the pre-suppurative stage of bubo in some cases. It is evidently due to absorption of toxines from the primary focus of infection in the genitalia.

The history of our attempts to prevent suppuration is in most cases very discouraging; we usually go on temporizing for some days or weeks, only to find that suppuration finally occurs.

The abscess is easily opened it is true, but the surrounding tissues are so thoroughly infected that none may say when healing will occur. We may have during this delay, more or less constitutional disturbance which may be of a serious nature.

The possibility of tubercular infection is also to be taken into consideration. Looking back to my hospital days, I recall many wearying cases of bubo of long standing. I recall particularly, the digging, scraping and cauterizing of the

proliferating glands in open buboes, and the everlasting duration of healing under such treatment.

It is my opinion that in by far the majority of cases, suppuration has really occurred within a week after the onset of the bubo, even in the less fulminant varieties. Sometimes, perhaps, absorption may occur, but I believe this to be rare, and certainly not to be desired.

The golden moment then, is before distinct suppuration, *i. e.*, fluctuation has occurred, and this opportunity should be improved by a radical operation. Even though the glands may not suppurate, they are a perpetual source of annoyance and anxiety, for they do not readily go back to their normal state.

By the early removal of the glands we effectually prevent in the majority of cases, infection of the surrounding tissues and subsequent annoying abscess. In all cases, we remove a possible impediment to locomotion.

In most cases, healing is primary and prompt,and when it is not so, it is because the operation has been too long delayed. Even though primary union does not occur, healing is much more prompt than in cases operated on later, for all of the originally infected tissues have been removed, and there are no glandular remnants to perpetuate suppuration.

When suppuration has actually taken place, and peri-adenitis exists, free incision and curetting is demanded. If the bubo be not virulent, suturing is justifiable if due antisepsis be observed. Virulent bubo in full suppuration, requires : 1st, thorough cleansing with peroxide of hydrogen ; 2d, cauterization with pure bromine or carbolic acid. When granulation is well advanced, secondary suturing is admissible. For dressing granulating buboes, there is nothing equal to oakum or balsam Peru.

In conclusion, I will state it as my opinion that an early operation should be urged in all cases of bubo not distinctly syphilitic and even in the latter where a tendency to inflammation exists. By thus operating we secure : 1st, possible security from constitutional sepsis ; 2d, immunity from possible gland tuberculosis and secondary general infection ; 3d, prevention of suppuration, chronic abscess and sinuses ; 4th, avoidance of extensive tissue destruction and a resulting unsightly scar ; 5th, an avoidance of serious interruption of the patient's vocation ; 6th, a duration of healing measured by a few days or weeks, in lieu of the many weeks or months required by other plans of management ; 7th, freedom from dangerous, infective or hemorrhagic complications.

Opera House Block, Chicago.

DIET AND VOICE.

By EPHRAIM CUTTER, M. D.

[Continued from The Times and Register of February 25, 1893.]

AERATED waters, though not regarded as foods, need mention since they are so much used at meals. They depend for their effervescence on CO_2 gas, which is the poison of the venous blood, and removed from the lungs as a waste product. Certainly it is not a food, as it is not a normal element of the tissues in its free state and does not comply with the definition here given. At first it is an agreeable stimulant. Poisons like the sugar of lead are agreeable. But CO_2, long continued in excess, is a paralyzing agent on the parts in which it comes in contact, and adds unnecessarily to the work of the lungs to rid the system of it. When the muscles of the stomach are not too much paralyzed CO_2 is eructated. Otherwise the stomachic walls may be distended and thickened and the whole abdomen seem as if taken up by the distended organ. CO_2 may exosmose and paralyze the diaphragm and heart, weakening both ; all of which acts to the detriment of voice culture, one secret of which is that the lungs are kept full by a free action of the diaphragm, expansion of the abdomen and the expiration of the breath, controlled by the breath bands commonly called the false vocal cords. Besides, the mechanical distension of the abdomen inteferes with the respiratory movements. Again CO_2 in large quantity and long continued is regarded by some (of whom I am one) as a great cause,by its paralyzing power, of catarrhs, which, when located in the throat, make much trouble for vocalists. Again, the large amount of sugar in soda water helps to form more CO_2 in the alimentary canal, especially when it gets into a stomach filled more or less with

fermenting yeasts, because the peristalsis has not cleansed it enough. Enlarged and distended stomachs do not propel forward food, so rapidly as healthy ones.

From all this vocalists should avoid carbonic acid waters. If we could have our drinks aerated with oxygen gas, it would be a great improvement.

BEVERAGES.

Most of these contain infusions of roots and herbs, with a mild admixture of carbonic acid gas, alcohol, resins and essential oils. Home-made beer, cider, mead, perry and must come under this category. CO_2 is the main objection to them. They are the least objectionable of all fermented drinks. They refresh, to be sure, but it is a question I have solved for my own benefit that I am better off to drink pure distilled water or spring water, at the ordinary temperature of the atmosphere and without CO_2. My thirst is slaked, my body cooled, my stomach not chilled. If there is gas in my stomach, it is passed along and its paralyzing effects on the throat are avoided. I think that vocalists should use distilled or spring waters when they are to be had.

MALTED LIQUORS.

In the time of Edward IV. the law to pay Christmas singers and in existence until recently was, "He eateth in ye halle with mynstrieles, and taketh at night a loffe, a galone of ale, and for Sommere ij candles pich, a bushel of coles * * * * if he be syke, he taketh twoe loaves, ij messe of meat, one gallon of ale;" Realm of music, p. 64, by Prof. L. C. Elson, who thus comments: "One would imagine that the many gallons of ale would eventually have hurt his voice!" These are the writer's sentiments; for beside the mechanical, physiological and pathological effects of the CO_2 in ale, the alcohol adds its like effects. My experience is limited as to music in beer gardens, but generally it is furnished by performers on the stage, while the bloated listeners stupidly sit, smoke and drink, but don't sing much. Their wise, stolid looks come from a preoccupation of the system, with its tasks to take care of the beer in the stomachs and the tobacco in the lungs. There is not much left of life force to speak or sing with. From the magnificent plants of the manufacturers, the costly teams and turn-outs, the aesthetic and artistic beauties of the beer saloon, the political control and the lavish display of wealth by brewers, one would think that the chief end of man was to make and drink beer, and that its manufacturers were the highest development of anthropological culture and evolution. A large part of the procession of the quarter millennial of Boston was made up of empty beer and ale casks, piled high in air!! But life does not consist in drinking beer, nor is the greatness of Boston in beer so much as in tea, as revolutionary times showed.

With all due respects to the German nation, I think they are greater in instrumental than in vocal music. Save at the Xth International Med. Congress I have never heard German vocalists excel those of other nations. They tolerate singers out of tune and time; even on special occasions where perfection was to be expected. If in musical performances we include the audience (and we must, since a concert requires an audience) then the drinking customs are peculiar in Germany. I saw at Berlin, 1890, at a concert, between the pieces, a man take from under his chair a tall champagne bottle, remove the cork and then putting his mouth to the bottle mouth elevate the bottle from the horizontal position to a vertical and guzzle down drink on the front row of seats !! Had not my wife arrested me from behind I should have roared with laughter.

There is a fascination in doing something when one hears music. For example, watch a beautiful picture. The figures will become animated and seem to almost move and a curious feeling will pervade the frame which is very agreeable while the music is performed. It is possible that my vertical bottle drinker friend derived a like pleasure from digesting his liquid food and hearing the music, but it was curious ethics !

It cannot be denied that malt liquors are food to a certain extent, as the malting makes the barley more soluble in the water of the beer and hence easier to digest.

The water certainly is food. The hop is not.

The vocalist who abstains from malt foods in excess will make no mistake. The bane of man is fermentation in the alimentary canal, as we hope the reader will clearly see before we are through. Good vocalization implies the existence of good health. Fermentation implies bad health. Hence, fermentation and good vocalization are incompatible. Had the soloists at Berlin imitated the vertical bottle drinker in their audience, it is doubtful if we would have heard one of the best concerts in the world.

WINES.

Where there is not already too much fermentation going on in the alimentary canal, the use of wines, genuine and moderately employed, is beneficial. The soluble parts of the grape juice, not changed into alcohol or vinegar, are foods, but inferior to solid foods for nourishment. Some nations, as the Jews, have used wine for food—Our Savior used wine. While there is an authorized use of wine there are many unauthorized uses, *i. e.*, when one is urged to drink against his will to comform to the ethics of the table, saloon or bar. No one should be dictated to as to what he eats, drinks or wears, unless in case of children or minors, or when dictation is asked for. For vocalists to diet on wine, because some insist he shall for company's sake, is an infraction of inalienable rights. It is refreshing to see those who drink at the present day, pay more respect than they did to these rights.

Mr. L. W. Mason, of Boston, who has introduced his plans of teaching music in America, Japan and Germany, says that Norway and Sweden furnish the finest voices and excel those of the beer drinking nations.

He says also that the wine voice is superior to the beer voice, which is sleepy, hoarse and indistinct in tone. This trouble is laid to the language, but he thinks it is the beer. In Sweden and Norway they use small quantities distilled clear liquors; no intoxication, showing that a moderate use of these liquors does not injure the voice.

Some deny that distilled liquors are food. Once a patient of mine for ninety days lived on one and one-half pints of whisky and water. Now, if alcohol was not a food, he would have died in forty days (as dogs do on flour) or less; as the man had chronic erysipelas, which necessitated the amputation of the left thigh. After this he lived for fifteen years. It should be said that he showed no signs of intoxication and had a very poor voice during this alcohol diet, but when convalescent, a tablespoonful of whisky would fuddle him. I don't think I would recommend alcohol as a diet for vocalists, but for this patient it was take whisky or die. Should any vocalist get into the same dilemma under my care, I should pursue the same course as I would in giving strychnia, belladonna or opium.

Alcoholic liquors aid the production of fatty degeneration, probably because alcohol and fats are carbohydrates. They congest tissues and retard the circulation, as seen in drunkards noses and stomachs; they absorb water from the system; they may go on to the vinegar fermentation in the alimentary canal and help to produce consumption of the bowels; they retard elimination and thus allow the accumulation of effete and worn out products, which may cause diseased conditions, as the gravel, gout, rheumatism, asthma, hay fever, etc. Vocalists can use better diet than alcoholic drinks.

PICKLES, CONDIMENTS, ETC.

In ancient Greece the enactments obliged the organizers of choruses among other things to guard against the singers "eating anything prejudicial to the voice." From chance expressions in the works of several Greek and Latin writers, we learn that "pickles and certain highly spiced preserves were to be avoided by vocalists." (L. C. Elson as above.) The same views are held now, as these things are difficult of digestion, uselessly use up nerve force needed for the voice and other functions, may cause colic and diarrhœa, both of which would be direct interferences with vocalism at concerts, where everything is arranged on a program before hand and expected to be performed, as the word "program" signifies.

If vocalists who crave vinegar and its preparations would use lemon juice or tartaric acid vinegar made from wine, in place of the common acetic acid vine-

gar preparations and adulterations, they would run less chance of harm. Wine vinegar can be made from native grapes or had from the wine dealer. Acids are useful when the liver is torpid.

Condiments moderately used are useful aids to digestion. Those who find any foods harmful should let them alone. Even dogs know enough to let injurious foods alone or, if not, to eat grass, which acts as an emetic and relieves.

SALT

Is a condiment; it is a mineral which is found in every tissue of the body, as the touch test of nitrate of silver proves. It is a true food. Used in proper quantity it furnishes soda to the teeth, bones, bile and blood.

It gives hydrochloric acid to the gastric juice to digest lean muscular fibers. It preserves against animal parasites in the alimentary canal. It helps to keep the outlines of the red blood corpuscles in solid shape, clean cut and rigid. Thus it aids the capillary circulation in which nutrition is mainly performed.

For these reasons salt is a good food for the voice when used in proper amounts, which the sense of taste admirably defines at once. Salt is usually dissolved in watery liquids when used as food and hence has its place here. When sprinkled on solid food it is soon dissolved in the juices of the alimentary canal.

The system suffers much from its withdrawal. This is shown by the efforts made to procure salt in times of war and by animals in a state of nature. The system also suffers from salt in excess, as on shipboard in scurvy. Salt is so indispensable and powerful that the voice cannot afford to do without salt.

ICE WATER

May be used in health, apparently without injury to the voice, still it is not a universal drink and should be used with moderation. No nation uses ice water like the American. In Europe street ice carts are a curiosity.

Ice water in the stomach absorbs vital heat, which is an important item where persons are feeble. It must arrest the process of digestion until the normal heat has returned. There is a sense of gratification in its use, hence ice water is a popular thing in this country to slake thirst. I doubt very much if the healthy larynx is benefited by ice water for vocal exertions. For myself I prefer fresh, pure water, *at the ordinary temperature of the living room.* I know it slakes thirst as well, and its free use is not followed by the depressing effects on the solar plexus of nerves which occur to me after a large drink of ice water. Cold paralyzes the body when held in contact. This is seen in surgery, when the skin is frozen by ether in spray or in drops. The nerves of the skin are benumbed so that operations may be done without pain. So long as one of the great banes to the voice is in the fermentation paralysis in the alimentary canal, what is the sense of increasing it inside the stomach by ice temperatures?

TEA AND COFFEE

come in the category of hot water, as they are conventionally drank hot. They are composite drinks made up of water, sugar, milk and the soluble principles of tea leaves and roasted coffee grains. I am inclined to think that they, moderately used by vocalists, are useful, if they don't cause sleeplessness or interfere with the action of the heart, as the late Rev. Peter Kimball thought. He died in June, 1892, aged 99 years and three months, and he never, since 1830, used tea or coffee for this reason. Since 1817 he had not used any alcoholic drinks. To the disuse of these drinks he largely attributed his longevity. I have in my possession a much prized letter of his dated March 23, 1892. Its beautiful script and clear expressions make me heed his ideas. He had a good voice, which he sampled to me by singing one of Napoleon's marches, at the same time drumming on a bag of sand with ordinary drum sticks, in April, 1892. His case shows that the disuse of tea, coffee and alcohol are no detriment to the voice.

I have taught that sugar is no desirable addition to tea or coffee, while the conventional starch diet supplies it too freely, and has to change into sugar before assimilation in the liver, one of the functions of which is sugar making, in which any sugar in the bowel may be clogged by the sugar taken in coffee or tea. This

clogging does not help the stomach, bowels or larynx, as it is harder for life force to run the system with a clogged liver, to say no more. Since to some tea and coffee taste better without sugar, those vocalists who wish to be in the best of condition would do well to curtail the use of sugar and thereby save their strength, or dynamos, for the voice. Milk and cream are good additions to tea and coffee.

MILK.

There is no doubt that the healthy infant's voice, while feeding on a normal breast of mother's milk, is perfect and conforms to the true principles of vocal culture. Milk is the type of liquid animal food for babes. It is about eighty per cent. of water, mixed with the products of the protoplasm of the epithelia that secretes it from the blood, with a full and proper proportion of organic and inorganic materials to grow a normal body. Other things being equal, the vocalist who has been fed in infancy on normal maternal milk will have an advantage over those fed on its substitutes. There is no perfect substitute for normal breast milk. When the teeth come it is time to use them, as my father, the late Dr. B. Cutter, used to say. Milk is an unnatural diet for adults to live on alone. I have known this to be done. In one case a skin disease resulted which ceased on returning to solid food, in connection with milk. The quantity of milk needed for an adult is large—*i.e.*, two or three gallons a day. One objection is the large amount of sugar. The liver of a babe is very much larger in proportion to its size than an adult's, and this may be one reason why the infant thrives on milk alone. Milk diet used by an adult in Bright's disease, after the albumen has been removed from the urine by special treatment, will cause it to return at once if the patient has not sufficiently recovered.

This albumenuria probably comes from the excess of fats in the milk and from the fact that Bright's disease is a result or manifestation of fatty degeneration of the kidneys. A certain amount of fat is necessary for the body, but when fat replaces other tissues, it then becomes or causes disease. There is no doubt that the many special fats, lecithin, etc., found in milk, nourish the nervous system, but it is better for the adult to use them in the form of butter.

Another advantage in the case of babes, is that the milk is taken directly from the gland, warm with the life maternal, free from taints of atmospheric and milkmen's impurities. The milk has not had time to change chemically by exposure. It is considered such an advantage that some Americans recommend milk warm from the cow for the use of their patients. Vocalists desirous to take milk would find this plan desirable. A suitable glass bottle, thoroughly washed and corked, is carried to the cow or goat, immersed in a pail of water warmed to blood heat. Here it is filled by milking from one teat, and drank in the presence of the animal, or taken, immersed in the hot water, to the patient and drank immediately, or as speedily as possible. I knew a case where a boy was allowed to milk his father's cows at will in the pasture. The voice of this boy, when developed in manhood, was very good.

BUTTERMILK,

or what remains in the churn after the butter is withdrawn, is by some regarded as a fine food for adults. It is usually in fermentation like koumyss, made from mares' or cows' milk. In my opinion all these are objectionable to the voice, as food in fermentation is such a bane to good health. Food should be digested, not fermented, in the alimentary canal of those who would have the full enjoyment of the voice.

LIQUID FOOD WITH MEALS.

From observing that animals other than man take their meals without water, some aver that man should do the same, on the ground that the digestion is interfered with by diluting the stomachic and intestinal juices too much. The opinion of such is worthy of respect, but the writer thinks that there is not such a dilution from the fact of the

COLLATERAL CIRCULATION'

in the stomach during digestion. That is, the fluids drank during a meal exosmose into the circulation, leaving the solid food comparatively dry. Next the ganglionic nerve centres of the solar

plexus cause a profuse endosmosis of gastric juice, which deluges the food, is churned up with it by the peristalsis until saturation, or the nerves above named call a halt, and another exosmose occurs, carrying with it the soluble portions of the food along with the fluids into the circulation to nourish the body. When the food is nearly dry an endosmosis recurs, and so on until the food is dissolved or passed onward to encounter a like process in the intestines. I was taught that the sum of this collateral stomachic circulation was calculated to amount to several times the bulk of the body systemic daily. If this is so it must be an advantage to have plenty of fluid to work with, and which does not interfere with the digestion by dilution, as it does not stay in the stomach long enough and the kidneys will very rapidly excrete an excess of liquid taken at any time, as a general rule.

From a careful study of the use of hot water, one pint one hour before each meal, the writer is of the opinion that in some cases the dry, undigested food does not fairly pass out of the stomach before the water is drank preceding the next meal. This shows the value of hot water to wash out a stomach, which may have been partially paralyzed by the accummulation of fermentation vegetations, like an old yeast pot, as one puts it, admirably. Be this as it may, I remember plenty of good vocalists who drank freely during meals, according the general ethics of American eating. The writer thinks that drinking fluids at meals, moderately, will not injure the voice.

News.

A Lugubrious Proposal.—A paragraph has been going the round of the press to the effect that the unemployed, having been informed that there was a scarcity of subjects for dissection in the London hospitals, propose marching to these institutions with the object of signing their bodies away for dissection after death upon receipt of a small immediate payment. It is understood that St. Bartholomew's Hospital and the London Hospital will first be visited. If not too late, we may inform the delegates that their bodies have no commercial value, since no one could guarantee or enforce the execution of the contract.—*Medical Press.*

Monthly Bulletin, N. Y. State Board of Health.—The average daily death rate during January was 338, which is 30 more than in December. The number of deaths is far below that of January 1892, because of the then existing prevalence of grippe; deducting this and making allowance for a normal increase, the mortality is excessive for January by between 600 and 700 deaths. The zymotic mortality was a little higher than in December, the only increase being in scarlet fever, which shows a continued rise; there were 237 deaths from it; its prevalence continues chiefly in the eastern part of the State. There is a slight increase only in deaths from diarrhœal diseases, although there has been reported the extended prevalence of so-called winter diarrhœa. The mortality from acute respiratory disease is excessive, by not less than 400, there having been 2300 deaths attributed to this cause. Other local diseases show, however, little variation from the normal average. From old age there is a large increase; this was noted a year ago. Also from unclassified causes, which includes certain chronic wasting disorders, there is an increase. A considerable number of deaths have been returned from grippe, and it would appear that it has caused about 600 deaths, and has been the cause of the increase in the mortality from respiratory diseases, some diathetic diseases and old age. There were 61 deaths from typhus fever in New York. From small pox there were fifteen deaths, all occurring in the Maritime district, outside of which it does not exist, although mild cases originating there developed early in the month in Waterloo. Reports from six large cities of 6550 deaths gives a death rate of 22.70 per 1000 population; that of the rural parts of the State was 19,00. In the cities there were 142 deaths from zmyotic diseases per 1000 deaths from all causes, and in the country 112. The proportion of diarrhœal mortality in the cities, as compared with the country, was about three to two in the same number of inhabitants.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.

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INTESTINAL ANTISEPSIS.

IN the *Medical Record*, Purdon comments on Baruch's allegation as to the failure of intestinal antisepsis. The argument is as follows: "In the first place, no sane man will now deny that typhoid fever is due to a specific micro-organism; and in the second place, in the light of scientific investigation, no man can afford to say that the bacillus is the only factor at work in the production of the various symptoms and pathological changes that occur during the progress of the case.

"If investigation has made any one thing in morbid anatomy conclusive, it is that the intestinal lesion is the only morbid anatomy in typhoid fever characteristic of the disease.

"We have, then, in typhoid fever, as the prime etiological factor, the bacillus, which furnishes a toxine as a result of its growth; the toxine constituting a second factor in the etiology of the disease. Now we shall be able to understand the pathology of the disease just in proportion as we understand and discriminate the action of the bacillus in contradistinction to the action of the toxine, appreciating at the same time the pathological avenues that are being opened up by the bacilli and their toxine, through which the pus-producing cocci may enter as a complication, the action of which must then be discriminated from that of the specific bacillus or its toxine. The bacillus begins its work in the glands of the small intestine. While we admit the possibility of the bacilli being taken on to the fauces in the act of inspiration, yet we deny their ability to produce the disease except they be swallowed and find lodgement in the glands from the intestinal canal, and not from the blood. That the typhoid bacillus is the active agent in producing the lesions in Peyer's patches is admitted, perhaps without a dissenting voice; but with reference to the part played by the bacilli after the intestinal glands are infected, there is perhaps a difference of opinion; but suffice it to say that, when one or more of the glands of the small intestine are infected by typhoid bacilli the patient has typhoid fever.

"In those glands we have an infiltrated disintegration which is entirely due to the direct action of the bacilli. This cheesy degeneration is non-suppurative in character, until we have engrafted thereon the action of the pus-producing cocci, some of which are even present in the intestinal canal

"In so far as relates to the action of the specific bacillus, typhoid fever is purely a local disease. The bacilli infiltrate the intestinal glands, and by their growth furnish a toxine which is absorbed, to the action of which is due all the systemic symptoms prior to disintegration in the glands. After this we have the action of the various pus-producing micrococci engrafted upon the local action of the specific bacillus, which not only increases the local lesions, but adds other poisons by absorp-

tion to the system, which is already laboring under a greater or less degree of saturation by the poisonous toxine, which has been set free by the growth of the specific bacilli.

"Resulting from the action of the toxine on the nervous centres and disturbance of all the functions of the body, we soon have added thereto pathological secretion and hindered excretion; then slowly at first but surely, come the products of tissue waste, resulting from more or less rapid emaciation, with the absorption of the products of disintegration and suppuration from the local lesions in the bowel. With such a condition it is certainly not strange that the heat-regulating centre is unbalanced.

"The pathological processes here outlined constitute a fair index to the clinical history. This view of the subject to the mind of the writer, furnishes a scientific basis for rational treatment.

"There has been much said in favor of the bath treatment, and yet every gentleman of a fair amount of intelligence must admit that the cold-bath treatment is empirical in the full sense of the term, for a man's common sense must necessarily teach him that the application of cold water cannot affect the specific bacillus.

"The bath treatment was first used to lower temperature, but observation taught men that when the patient reacted well from the bath, it also had a stimulating effect, through its action on the nerve periphery, by which it was supposed to increase the elimination of poisonous products from the blood, enabling the patient to nourish better, and altogether sustaining vitality, thereby increasing the patient's chances to outlive the disease.

"Nothing more can be claimed for the bath treatment now.

"This is all very well in its place as an empiricism, but it is like massage and the application of liniment to cure rheumatism, it never touches the specific cause of the disease.

"The internal administration of antipyretics is even less reliable; for while they lower the temperature, they do not always increase the elimination of poisonous products from the system, but they do generally depress the patient's vitality; antiseptics that are absorbed by the stomach never reach the bacillus, and for that reason should never be given except as they are required to improve the condition of the stomach for the digestion of nourishment.

"As to the failures of internal antisepsis, as relates to typhoid fever: What purpose have men generally had in view when giving antiseptics? and how have they proceeded? If they have attempted to follow the bacillus through the circulation to the lenticular spots in the skin, their effort was a failure before they began? That is to say, if antiseptics are given with a view to reach the bacilli through the blood, the effort is a failure. In the opinion of the writer, if scientific medicine indicates anything, it indicates intestinal antisepsis as the only rational treatment in typhoid fever.

"No man can intelligently say that intestinal antisepsis is a failure until he has discarded other forms of treatment and relied upon a systematic course of intestinal antiseptic treatment from beginning to finish, in at least a reasonable number of cases. The percentage of doctors that have done so is very small.

"The greatest cry against intestinal antiseptics comes from the men who have either never used them, or have used antiseptics without any regard to the real pathological conditions existing, hoping to hit somewhere.

"We hear men talk about the absurdity of introducing a germ-killer into the intestinal canal. And men sometimes talk loud about the high percentage of carbolic acid necessary to destroy the ty-

phoid bacillus, and in the same speech claim that it has not yet been determined what the typhoid bacillus is Those men never use intestinal antiseptics. There is a great difference between a germ killer and an antiseptic, as applied to intestinal antisepsis. Every observing man in practice, with an unbiased mind, can no doubt remember cases in which the odor of the discharges was favorably changed as a result of the continued use of remedies known as antiseptics, and yet those remedies were not regarded in the light of germ-killers, but possessed the ability to at least impede the action of the bacteria of decomposition.

"The writer is frank to admit that it requires the courage of conviction to step aside from the long-trodden paths of expectancy, cold-bath treatment, antipyretics, with other empirical measures, and place his patient upon a systematic course of intestinal antisepsis, to be continued from beginning to finish, in the face of the opposition that is still offered by the profession; but it is gratifying to have a consciousness of the fact that we owe our first duty to our patient. Careful study of the pathology of the disease gives us a scientific basis for such a course, and then it becomes still more gratifying to know that the results justify the means used.

"We have the specific bacilli at work in Peyer's patches; we have some of the various pus-producing germs in the intestinal canal, ready to extend the local lesions by suppurative inflammation so soon as the vitality is sufficiently lowered by the action of the specific bacilli; and in addition we have the ever-present bacteria of decomposition. Now, as far as possible, we want to hinder the growth of the specific bacilli, for in so doing we limit the amount of toxine absorbed, and in the same proportion render mild the systemic symptoms; at the same time we are preserving, to a greater or less degree, the vitality of the local tissues against the action of the pus-producing micro-organisms. It is also desirable to limit the action of the various micro-organisms contained in the lumen of the bowel, to watch carefully the condition of the stomach and mouth.

"From carefully conducted clinical observations, the writer is fully convinced that salol affects the specific bacilli to a greater degree than any other remedy now before the profession.

"We are aware that it is claimed that salol, though not absorbed until after it enters the small intestine, yet does not enter the system through Peyer's patches; we are satisfied, however, that when salol returns to its original constituents in the small intestine, its properties would reach the bacilli to some extent by endosmosis, at least; but let that be as it may, the administration of the drug favorably influences the course of the disease. We give salol in capsules, in doses of five to ten grains every four hours, as indicated by the symptoms.

"Upon the same principle we have become satisfied that sulpho-carbolate of zinc has the most favorable influence in limiting the action of the various micro-organisms in the lumen of the bowel, as manifested by the absence of tympanites, diarrhœa, and the characteristic odor of the stools, with far less frequent hemorrhage. It may be given in doses of two to five grains every four hours, alternated with the salol, as indicated by the abdominal symptoms. Though regarded as of little importance by the non-believer in internal antiseptics, it is of much value to the patient to rinse the mouth thoroughly with equal parts of listerine and previously boiled water, each time before taking anything into the stomach, and teaspoonful doses of listerine may be given in water from four to six hours apart, as indicated, to keep the stomach in condition to receive

nourishment. A small quantity of alcohol in some form promotes assimilation.

"With reasonable nursing, feeding, and hygienic surroundings, the writer expects his typhoid patients, under this system of treatment, to pass through the disease with a temperature reasonably mild, without delirium, headache, or excessive tympanites, with a moist and comparatively clean tongue, with hardly a probability of hemorrhage, almost certainly without perforation, without troublesome diarrhœa—in short, with a comparatively mild fever in every possible sense. Its duration being shorter, convalescence is more rapid and complete."

Annotations.

In *The Asclepiad*, Dr. Richardson gives some observations on the cause and prevention of death from chloroform. Death occurs from apnœal syncope, from epileptiform syncope, from cardiac paralysis, or from shock. Restoration is most likely after the first and last, and and least after the third. Restoration is much easier in cold weather; but usually fails when the temperature is between 70° and 80° F. Failure also is usual if the chloroform be administered several minutes before narcotism passes into death.

The only successful plan is careful, delicate and steady artificial respiration by double-acting bellows. The longest period from which recovery ensued, was in a rabbit, which lay apparently lifeless for six and one-half minutes. "The brain was dead, the cord was dead, the voluntary muscles were under no stimulus, the semi-voluntary muscles were under no stimulus; but there was one organ, which, though we could not discern its action, was in feeble action; and that organ was the heart."

Electrical stimulation simply exhausts the remaining vitality, and confirms the death. The injection of antidotes (ammonia, strychnine) is hardly applicable to chloroform; if the patient be alive, he will recover better without them; if dead, the remedy is a method by which the life-processes may be imitated, until the inner force is revivified by artificial respiration.

In syncopal apnœa, the inversion method is most promising, and strongly suggests the utility of the see-saw operating table. The injection of peroxide solution into the peritoneum was followed by momentary resuscitation, but final apnœa, as the oxygen bubbles accumulated in the pulmonary capillaries.

In the same number, Dr. Richardson writes of duality of the mind; intrathoracic auscultation; and the life of Thomas Sydenham. Under the head of original research, he treats of dehydration and moulding of organic structures under water gas.

In *The Sanitarian* for February, Dr. Bell calls attention to the vagueness of our information concerning the mineral springs of this country. The published analyses and the statements of the proprietors rest on a commercial basis; and too often the clinical tests are made with bottled waters, that very imperfectly correspond to the water as used directly from the springs. At very few of our springs are there to be found physicians capable of intelligently prescribing the waters and the *regime* best calculated to aid their action, and of moral courage enough to allow them to send away cases for which the waters and the conditions at the springs are unsuitable. Much of this uncertainty will probably be dissipated by intelligent study; and we are pleased to note that Dr. Bell promises us a series of papers on this subject, in his excellent journal, *The Sanitarian*.

Dr. W. E. Ashton, Professor of Gynecology at the Medico-Chirurgical College, has republished from the *Medical Bulletin* an outline of the technique of abdominal and pelvic operations, as performed at the hospital connected with the college. Dr. Ashton is taking high rank as an operator, even in that home of brilliant gynecological surgeons, Philadelphia, and this sketch of his methods is of value to every one who expects to perform similar operations.

WE clip the following from the Chicago *News-Record:*

"Dr. S. V. Clevenger is slated to succeed Dr. Richard Dewey as medical superintendent of the Eastern Illinois Hospital for the insane at Kankakee.

"About two weeks ago several state senators and representatives called upon the doctor at his home, 245 Lincoln avenue, and congratulated him upon his favorable prospects, for, they assured him Gov. Altgeld had selected him to become the head of the institution on the Kankakee river. This implied that Dr. Dewey had been asked to resign. Dr. Clevenger was surprised, as up to that the only knowledge he had of the matter was that some of his friends were urging the governor to appoint him. Said one of those who congratulated the doctor:

" 'Clevenger's name was advanced solely upon his past reputation. Medical men all over the state, regardless of politics, urged the appointment of Dr. Clevenger, being well assured that his past work was a good index to his future actions.'

"The appointment has not been made public by the governor, but there is no doubt that it will be given out in a few days.

"Dr. Clevenger is frequently called into courts as an expert on diseases of mental and nervous origin and has a wide reputation as a writer on brain surgery and kindred subjects. He was pathologist of the Cook county hospital for the insane for some time prior to 1884 and has held other positions calling for the exercise of his special work.

"Dr. Dewey, who was present at the meeting of the Medico-Legal Society Saturday night, confided to intimate friends that he had tendered his resignation to Gov. Altgeld, to take effect at the pleasure of the chief executive of the state. For fourteen years he has held the position of medical superintendent of the hosipital for the insane at Kankakee and before assuming that trust he served for several years in a high official station at the institution for the insane in Elgin. Dr. Dewey has ever been an ardent advocate of the detached-ward system and under his adminstration it has been brought to a high degree of perfection at the Kankakee hospital. There are now ample accommodations for 1000 male and 1000 female patients."

Dr. Clevenger is well known to the readers of the TIMES AND REGISTER, who will not need to be told that no worthier successor could be found for Dr. Dewey. An original and profound thinker, thoroughly versed in modern mental pathology, Dr. Clevenger also possesses that still more valuable requisite for such a position, a great heart full of kindly feeling for the suffering and afflicted. If Dr. Dewey is to leave the position he has so long and so creditably filled, we sincerely trust that Governor Altgeld will recognize Dr. Clevenger's eminent fitness for the place.

EDITORIALS in the Journal of the American Association, concerning the Association of Southern Medical Colleges, have aroused much feeling in that section, as we note in our southern exchanges. We have no sympathy with wholesale condemnations of classes or sections. The realm of science has no Mason and Dixon's line, to divide it into North or South. If we ever stop to consider whether a man comes from the one or the other, it is only to marvel at the number of illustrious members our profession has recruited from the South, and the brilliancy of their work.

It was unwise in the *Association Journal* to indulge in any such wholesale criticism; and now that it has excited such bitter feeling, the writer of the editorials ought to come out and shoulder the responsibility, all the more since it has been alleged that Hollister was the writer, which his friends deny.

PEOPLE who laughed poor old Brown-Séquard out of court for his testicle-juice theories, are now beginning to wonder whether he was such a fool after all.

The 10th Annual Report of the Philadelphia Polyclinic shows that 9585 cases were treated last year at the dispensary, and 650 in the wards; while $30,315.94 passed through the treasurer's hands. Twenty-seven professors and sixty-eight assistants comprised the teaching staff, and 110 pupils were in attendance during the year.

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PRURITUS.—PSORIASIS.

I WOULD suggest a special number on diseases of the skin.

I have had splendid results from the use of zinc sulphocarbolate.

In the case of pruritus, reported by Dr. Gould Smith (page 165), I would recommend the patient's feet to be bandaged with cotton, and saturated with boroglyceride solution, fifty per cent. Allow this to remain twenty-four hours, then remove it, and bathe the feet in solution of distilled water, Lloyd's Hydrastis, and carbolic acid. Continue this for several days, regulate the digestion, and look to the diet. I had a case similar to the one described, that was cured by this treatment.

For the case of psoriasis, reported by Dr. W. D. Turner (page 166) I suggest the following:

"℞. Acidi chrysophanici. . . . . gr. xx
Liq. carbonis deterg. . . . . ♏. xx
Hydrargyri ammonio chloridi . . . gr. xx
Adipis benzoatis . . . . . ℥ ij"

M. Fiat. ung. Sig.—At night, after washing the diseased surface thoroughly, with a warm antiseptic solution, and sponging dry, then, standing in a warm room, have an attendant rub on the ointment; devoting at least forty minutes to the operation.

Internally I would give elixir of lactopeptin and liq. potass. arsenitis; pushing the arsenic to its limit if necessary, with the antiseptic treatment as recommended by the editor. I had good success in treating a very persistent case of psoriasis in this manner. I hope the editor will pardon me for taking the cue from him; but these two cases mentioned were so similar to some that had been under my care, that I could not resist the temptation to offer a few suggestions.

CYRUS GRAHAM, M. D.

CEDAR HILL, TENN.

[The editor has not labored under the hallucination that the sum of human knowledge is circumscribed by his own cranium, at least not since he left college. Nothing would please us so well as to see the TIMES AND REGISTER become the medium for the interchange of thought and of experience between the practising members of our profession. We thank Dr. Graham for his useful suggestions, and hope that he and others will consider our pages open at all times to anything that will be of use to the practitioner.—W. F. W.]

The Medical Digest.

THE USE AND ABUSE OF ANTIPYRETIC DRUGS.

WHAT is the present attitude of the medical profession toward drugs which lower animal heat? We say "drugs" rather than "measures," because, whatever may be the value of the various forms of hydrotherapy, etc., they cannot be generally employed by the American physician in private practice.

The prevailing opinion as to the use of antipyretic medicaments unquestionably is that we should avoid alike the antimonials and venesection of a very few years ago and the more recent and more unprofessional treatment (if treatment it may be called) known as the "expectant method." When finally, the unworthy dogma that an acute disease must necessarily run its course, exploded in the minds of men, the way was open for a cosideration of what would be a rational method for the treatment of fever.

This involved, of course, an examination into the nature and causes of fever, and at this point, the variations of opinion were many and decided. Is fever a cause or a result? Is it due to microbes, or toxines, or both? Does it arise secondarily, from severe or special functional disturbances and finally determine organic lesions? Or does the lesion elevate the temperature as a new invasion often does in pneumonia? Or is fever a direct result of chemical changes or telluric influences?

One point seemed evident that if we delayed to learn the real nature of fever before applying the treatment the patient would have to wait for his relief and the

profession would be obliged to occupy the somewhat queer position, for professional men of doing nothing at the bedside, because they really knew of no useful thing to do.

Undoubtedly, therefore, to be useful in all fevers we must first become to some extent empirical. Whatever may be the real nature of fever, it is the enemy in full view and must be attacked. In our present knowledge, it seems useless to discuss the matter as to whether the lesion causes the fever or the fever the lesion, and ignore the fact that neither the lesion nor the fever, must necessarily co-exist. The one thing we do know is that when we succeed definitely in controlling the fever, the malady gradually subsides. And, we know also, that if we can do this in the beginning, we may save lives by preventing localizations. We know also that the comfort and early convalesence of the patient depend largely upon what we do with the fever. These considerations have tended to somewhat drown mere polemics, and to some extent, even etiology and early diagnosis. *But they have advanced our practical therapeutics.*

Physicians who by a thoughtful experience, had arrived at some of the conclusions which we have laconically stated began to have a higher approval of their antipyretics of which, with all their variations of opinion, they had more or less constantly made use.

In finally fixing upon antipyretics for daily use, they chose those which where prompt in action, gave the least depressing effects and possessed such accessory advantages as an analgesic or gentle diaphoretic power. Undoubtedly the fact that the new antipyretic drugs, or some of them, possesses these powers though in varying degrees, aided their choice by offering them drugs whose general characteristics were attractive to them. It is true that some practitioners have abused the aromatic remedies, and that some have returned to the use of remedies offered by the vegetable kingdom. But these cases are exceptional.

Regarded from a general point of view there is a strong tendency to largely employ the new antipyretics and analgics and to discontinue the employment of vegetable antipyretics and more especially the opiates. A striking example of this has been observed in what has been very recently said by many practitioners concerning antifebrile drugs, and more especially, perhaps, phenacetine. From a late brochure we quote some of the observations made on this medicament: Dr. Murphy, of Salem, Indiana, states that, "while antipyretic remedies have no specific effect upon the causes of fever, they serve a very useful purpose in the treatment of all pyrexias, a fact which, as he states, will not be denied by those who have given them an extended trial. In his belief they lower temperature by increasing the radiation of heat from the body and diminishing heat production." This writer found phenacetine useful in hemicrania, whooping cough and muscular and neuralgic pains. Dr. Perdue, writing of the treatment of pneumonia, says: "The fever produces sweating and gives ease. It is in my opinion the remedy par excellence. I give it in nearly all cases. Some use cold applications to reduce the fever and to give ease. Believing that the inconvenience, exposure and depressing effects are too great, I have never tried them. American physicians are against the practice." Dr. Bailey, of Louisville, writes that, "Phenacetine is the safest remedy to give so far as the heart is concerned, of the coal tar derivatives. I have been inclined to favor phenacetine because it gave the best results with the minimum of danger by heart depression." Dr. E S. Elder, of Indianapolis, reported that he believed that the injury charged to antipyretic medication resulted from continued high temperature, which meant increased metabolism or a burning up of the tissue," adding that he uses phenacetine largely in the place of antefebrin. Antipyrin he has not used for some time. Dr. Beatty, of Kentucky, called attention to the fact that "Phenacetine is not objectionable as an antipyretic in pneumonia, because it does not affect the heart unfavorably."

Dr. Laine, writing of an epidemic of influenza, says: "Phenacetine, taken every two hours, was the most universally used of the so-called specifics. Its use or abuse was attended with very little danger, phenacetine being the least depressing of the newer antipyretics."

In bringing together these brief but significant remarks out of the many lately published reports on phenacetine we are able to more clearly perceive their trend, and this we would consider to be somewhat as follows: The fact that phenacetine is a certain and potent antipyretic is accepted as an accomplished fact, the further propositions that phenacetine is safe, does not depress and does not affect the heart unfavorably, are clearly stated and constitute a remarkable concensus of opinion from physicians who have had an extended experience with this remedy, and know whereof they speak.

The conclusions concerning the therapeutic uses of phenacetine as an analgesic, a nerve sedative, and a gentle diaphoretic show an unanimity of opinion quite as decided as those expressed in favor of this remedy as a safe and certain antipyretic.

Dr. Merz, of Sandusky, writes: "Phenacetine undoubtedly possesses peculiar power of an antipyretic and analgesic nature. In addition to this, it induces a decided nervous sedation. Of all the remedies in influenza, I believe it to be the best. This opinion is, I believe, a common one. Phenacetine is entirely free from any distressing or dangerous effects, while it is prompt in its action." Dr. Robinson, writing of the same condition, says: "Phenacetine, in small repeated doses, diminishes pain and fever and promotes perspiration, thus making use of another great emunctory of the economy, viz.: the skin."

Dr. Hutchinson, of Providence, reports as follows: "Phenacetine stands first in the list of remedies for the relief of insomnia and pain in the permanent neuroses following grippe."

Dr. Porcher was an early believer in the analgesic powers of phenacetine; he writes: "Phenacetine is the best substitute for morphine. It is given in an evening dose of five to eight grains; such dose may be often repeated without harm. Sleep rapidly follows. It is absolutely innocuous and may be prescribed to children."

We need not multiply examples of the estimated value of phenacetine in these directions, for the facts are widely understood, but we may again refer to the remarkable harmony of the reports cited, and this naturally leads us to ask if such accord be susceptible of an explanation. Of this we may at least say that probably one of the chief reasons why phenacetine possesses the energetic, safe and uniform action described by the authors quoted, lies in the fact that unlike the crude and "secret" mixtures now so largely offered to therapeutics, phenacetine is a single, organic chemical body, and hence of an unvarying therapeutic power. In confirmation of this view, attention might justly be called to the great variety of new conditions in which practitioners, widely separated, have experimentally employed phenacetine with continually successful results. Of these cases a considerable number have been reported in recent medical literature.

NOTES ON REMEDIES: FROM SQUIBB'S EPHEMERIS.

Real gum arabic is once more obtainable; the sources of the drug in the Soudan having been re-opened.

Agaricic acid is proving useful to check sweating. That derived from the Agaricus Albus should alone be used; as the fly agaric produces muscarine, whose effects are exactly opposite.

Camphoric acid is becoming popular as a remedy for sweating, and as an intestinal disinfectant.

Carbolic acid has been used with benefit, subcutaneously, as a remedy for tetanus, and for articular rheumatism.

Para-cresotic acid has been recommended for rheumatism, catarrhal pneumonia, gastro-intestinal catarrh, and typhoid fever. Young adults may take a drachm daily.

Pryoligneous acid is a very cheap and useful disinfectant.

Agathin is used for neuralgia and rheumatism. Dose five to ten grains, thrice daily. Benefit appears several days after administration(?) Full doses cause headache.

Amido-eugenol acetate is a new local anesthetic for the mucous membranes.

Amylene hydrate has not proved superior to the bromides in epilepsy, and is costly.

Analgen is being tried for rheumatism. Dose, 15 grains.

Antikol is composed of acetanilid, 75 per cent. sodium bicarbonate, 17½ per cent. and tartaric acid, 7½ per cent.

Antinervin, two parts acetanilid, and one each of salicylic acid and ammonium bromide, has proved of value as an analgesic and nerve sedative, and as antirheumatic and antipyretic in rheumatism. It is cheap and non-toxic.

Antipyrin has been reported useful in pertussis, chorea, diphtheria, and as a local anesthetic for the nose.

Antiseptin is a simple mixture of zinc sulphate, 85; boric acid, 10; zinc iodide, 2½; and thymol, 2½ parts.

Antiseptol is used as a substitute for iodoform.

Apiol is variable in quality as found in market.

Aristol, dissolved in sweet almond oil, is being injected for tuberculosis: giving good results in the early stages, and causing no local trouble.

Copper-arsenite proves of doubtful value in gastro-intestinal affections.

Asaprol is urged in gout, rheumatism, typhoid and influenza.

Aseptol is less caustic and more antiseptic than carbolic acid.

Asafetida, to prevent abortion, dose three grains, increased to fifteen.

Atropine, for lead poisoning, given with potassium iodide. Also as a hemostatic hypo., up to grain 1–50.

Benzanilid, a substitute for acetanilid. Dose for children, one and one-half to nine grains.

Benzonaphthol, as an intestinal antiseptic; non-toxic, antiseptic, diuretic, rapidly eliminated by kidneys, rendering urine aseptic. Dose four to eight grains, in syrup and water.

Benzosol, in incipient tuberculosis and as a substitute for creosote and guaiacol. It is pleasant to the taste and unirritating, and splits up so as to liberate guaiacol.

Strontium bromide, for gastric catarrh and epilepsy; in the latter, combine with an intestinal antiseptic.

℞ Strontii bromidi, ... ʒ jss
Beta-naphtholis, ... ʒ j.
Sodii salicylatis, ... ʒ ss.
M. S. Take daily, in three doses.

Benzol, for pertussis and influenza; also locally, for pediculi (avoid fire), and internally for trichina.

Bromamide, antipyretic, causing no sweating, dose ten to fifteen grains.

Bromoform has few failures in pertussis. It aborts the paroxysms and lessens their number, but does not shorten the course. It is toxic if pushed.

℞ Bromoformi, ... ♏ xvi
Alcohol, ... ʒ ij.
Glycerini, ... ʒ xij.
Tr. cardamom comp . . . . . ʒ ij.
M.

Bromoform has also been inhaled for diphtheria, and applied locally to mucous ulcers.

Calcium chloride, combined with a fibrin-ferment solution, is suggested as a styptic.

Camphoid consists of one part pyroxylon and twenty each of camphor and dilute alcohol. It is a solvent of iodoform and a cleanly basis for carbolic acid, salicylic acid, resorcin, iodine, chrysarobin and ichthyol.

Chloralamid, as a hypnotic, has two advantages, it does not require an increasing dose with use and it induces a habit of sleeping after the drug has been discontinued. It has also been found useful in cardiac asthma and in sea-sickness.

Chlormethyl is used locally for neuralgia, a jet from a syphon bottle being directed against the painful part.

Convallaria majalis is an efficient alternate for digitalis.

Cresol-iodide is a substitute for iodoform, the cresols are antiseptic, but variable in composition, adhere to hands or instruments or render them slippery, and readily oxidize.

Creolin is more antiseptic than carbolic acid, but some bad results from its use have been reported.

Dermatol, as an antiseptic, proved more effective than aristol or iodoform. For eczema and burns, one part to nine of petrolatum. Its desiccating effect is remarkable.

Diaphtherin, an antiseptic less toxic than carbolic, sublimate or lysol, and cheaper. It attacks silver and nickel plating, but is not caustic.

Diuretin acts on the renal epithelium, and relieves the severe scarlatinal or mitral dropsy even after digitalis has ceased to act. For children, two to five years of age, the dose is eight to twenty-five grains daily ; from six to ten years, up to forty-five grains daily. The drug is unstable and should be prescribed alone, in powder or solution. It must be kept from the air. Under the name of sodio-theobromine-salicylate it costs less than half as much as when prescribed as diuretin.

Ethyl chloride, local anesthetic, a jet of the vapor applied to the part. It is very inflammable.

Eugenol-acetamide, has properties similar to those of cocaine.

Euphorin, an antipyretic, specially useful in obstetric and gynecic cases. It acts best after the acme of the fever has passed, showing its effects in one-half to two hours. Sweating moderate ; little cyanosis, no collapse ; indicated for rapid and marked antipyresis: fairly good in surgical fever ; potent in rheumatism, acute or chronic ; dose seventeen grains in five parts, in acute rheumatism fifteen to thirty grains in twenty-four hours, in chronic fifteen grains in four doses. It is a sure analgesic in non-specific neuralgia ; powerful antiseptic ; very useful in thrush ; locally superior to iodoform and is a local anodyne and promotes healing.

Europhen, a most effective substitute for iodoform, is used largely for ulcers, chancroids, nose and throat affections and in one per cent. petrolatum ointment for the eye.

Exalgin has had many toxic cases reported. It is useful for chorea, with mental excitement, and in exophthalmic goitre.

Exodyne is composed of acetanilide eighteen parts, and sodium bicarbonate and salicylate, one part each.

Fuchsine has proved useful in throat affections. Antiseptics applied with it have increased penetrating power.

Gallacetophenon is a promising substitute for pyrogallol in psoriasis, etc. It is non-toxic and does not stain linen. A ten per cent. ointment is used

Guaiacol and its carbonate have largely replaced creosote in tuberculosis.

Haemogallol, for anemia. Dose, 1½ to 7½ grains, before each meal.

Haemol contains a little zinc. Its action resembles that of haemogallol. Both act on anemia rather rapidly.

Helenin is said to be very destructive to the cholera bacillus. It is used in ozena, ague, diarrhœa and leucorrhœa. Locally it is irritant.

Hydrastinin contracts the relaxed uterus, but has no advantages over hydrastis.

Hydrogen dioxide or peroxide is increasing in popularity. It is added to drinking water as a cleansing agent, a pus detecter and destroyer, etc. Free acid is necessary in its solutions, to preserve it from decomposition.

HYDROTHERAPY IN INSOMNIA.

WHAT I dread most at the start, in all cases for rest, is grave insomnia. Whether it be accompanied by a state of mild mental excitement, such as we all know, or is a pure incapacity to go to sleep or to stay asleep, or whether it be in popular medical belief a congested state, I am apt at once, in bad cases, to use thrice a day lithium bromide, at first in thirty-grain doses, at noon, at 6 and 9 P. M., given in the malt or not, and soon decreased grain by grain. If I want a positive aid at bed time, I prefer sulfonal in hot water. *But of greater value are some of the hydrotherapeutic devices*, and best of these is what is known, or not known, as "drip-sheet." Just how this is to be given is of the utmost importance. The following memoranda must answer to show how careful one must be in my opinion, as to these details. I give them here in brief much as I do to a patient not under the immediate care of a nurse. I cannot help adding that several of the most useful of the water processes are neither taught in our schools, nor so accurately in hydrotherapeutic text books as to be of much value to the general practitioner.

Memoranda for Use, at Bedtime, of Drip-sheet.—Basin of water at 65° F. Lower the temperature day by day by degrees to 55° F., or to still less. Put in the basin a sheet, letting the corners hang out to be taken hold of. The

patient stands in one garment in comfortably hot water. Have ready a large, soft towel and iced water. Dip the towel in this, wring it, and put it turban-wise about the head and back of neck. Take off night dress. Standing in front of patient —the basin and sheet behind—the maid seizes the wet sheet by two corners and throws it around the patient, who holds it at the neck. A rough, smart, rapid rub from the outside applies the sheet everywhere. This takes but two minutes, or less. Drop the sheet, let the patient lie down on a lounge upon a blanket, wrap her in it, dry thoroughly and roughly with coarse towels placed at hand. Wrap in a dry blanket. Remove ice wrap; dry hair; put on night dress. Bed, the feet covered with a flannel wrap.

If all this seems to you, if you read it, too absurdly minute, I shall feel some regret. Yet believe me, it is worth the trouble, and the drip-sheet a remedy past praise. If it fails, a pack may succeed; this is more familiar to you. I doubt if the use of the drip-sheet is as well known.—S. Weir Mitchell, *Jour. of Balneology*.

Tumenol. — Experiments hitherto made show the value of tumenol :

1. As a drying agent which reduces inflammation and effects the covering of the affected area with a horny epidermal layer ; this action is specially seen in moist eczema, in erosions, excoriations, and superficial ulcerations.

2. In forms of pruritus.

In eczema its best results are produced upon the superficial, "catarrhal," desquamative forms, both acute and chronic.

Tumenol can be applied to the skin in the undiluted condition without any ill effects. The sulphone or "oil" has often a very beneficial result when applied *per se* to moist and vesiculous eczema. The powder was also sometimes used alone in the treatment of ulcerated surfaces.

Aqueous solutions of the sulphonate, two to five per cent., were employed for saturating compresses.

The paste was made of five to ten per cent. strength, the tumenol being added to the zinc paste already prepared, or tumenol powder substituted for the usual pulverent ingredients. The consistence of the paste is adjusted according to the kind of case treated.

Neisser says: "The properties of these forms of paste correspond for the most part to those of tumenol itself, and will certainly be the first to commend themselves to the experimenter. Whether the paste were made with tumenol or tumenol sulphone was not altogether a matter of indifference ; tumenol oil is more bland than tumenol. We convinced ourselves repeatedly of the superiority of tumenol paste over the simple zinc preparation."

The tinctures were prepared as follows:

℞ Tumenoli . . . . . ʒi
Ætheris sulphurici . . . . . } aa ʒiij
Spirit. vini rectific. . . . . }
Aquæ destil. aut glycerini . . . . }
M. S. Tumenol tincture.

The aqueous preparation when painted on the skin dries readily and completely; that containing glycerin leaves behind a somewhat sticky film suitable for holding a dusting powder.

The ointment used is made as under:

℞ Tumenoli . . . . . ʒj—ʒij
Zinci oxidi . . . . . } aa ʒi
Bism. subnitr. . . . . }
Ung. lenient. . . . . } aa ℥j
Ung. simplic. . . . . }
M. Ft. ung.

Unguentum leniens corresponds to the English cold cream. Other ointments were prepared with vaselin, lead ointment, or other common base.—*Med. Age*.

Case of a Child Who Drank Kerosene Oil.—A Hindu female child, about a year and a half old, drank about two ounces of kerosene oil. The child immediately began to cry. It was brought to me at once (4.20 p. m.) smelling strongly of kerosene oil. Five grains of sulphate of zinc were at once administered, which acted freely, the vomited matter smelling of the oil. At 8 p. m., the child was restless, feverish, abdomen tympanitic and tender, face bloated. Passed a bad night, very restless, sharp fever, nausea with occasional vomiting, and suppression of urine. On the second day these symptoms gradually subsided towards evening. On the third day the child was well. The treatment, besides the emetic, was an ordinary diaphoretic with occasional addition of laudanum as

the necessity arose. Milk was freely given. Thirst was constant. The bowels were not in any way affected. Suppression of urine was a prominent symptom; no urine was voided till twenty-eight hours after drinking the oil, and when it did appear, it came in drops, although there was a constant inclination to pass water throughout. I was informed that the child had passed water shortly before drinking the oil. Hot fomentations and bottles were employed.—*Calcutta Med. Reporter*

Electricity for Intestinal Obstruction.—A negress aged 18 years, a house servant, was suffering with severe pains in her abdomen, mostly about the umbilical region, with occasional vomiting. Her mistress had been giving her oil and salts for several days, and enemas without any action. The patient had been suffering with obstinate constipation for several months. I gave her an enema, using a rectal tube several inches up the bowels; gave morphine and atropine hypodermically to relieve pain; gave calomel. Saw her next day; no better; stercoraceous vomiting; bowels not swollen much, but very rigid, pinched countenance; applied electricity to bowels with a portable Faradic battery for twenty minutes without any relief. I told the lady that if the girl was not relieved by the next day, to send her to my office. Patient was brought to me next day; I applied a strong current of electricity to the bowels, using the Tripier induction apparatus, the positive electrode over the bowels, and the negative electrode in the rectum for eighteen minutes, when the bowels moved. A quantity of hard scybalæ passed, and continued to pass for several days, and had no further trouble with stomach and bowels.—Gillespie, *Memphis Med. Monthly.*

A New and Rapid Method of Removing the Uterus.—At a recent meeting of the Kansas City Academy of Medicine, Dr. Emory Lanphear presented a number of fibroid tumors, sarcomata, etc., removed by a new method of abdominal hysterectomy. The abdomen and vagina having been carefully sterlized, he makes an incision in the median line, terminating as close to the pubes as possible, draws the uterus with one tube and ovary to one side, and applies a clamp to the broad ligament; a strong ligature is passed a half inch away from this, including the blood vessels, and tied; the intervening tissue is then cut with scissors. Upon the opposite side the same procedure is carried out. When done, the uterus (hitherto held down by the broad ligament) can be lifted up into the wound and separation from the bladder and rectum easily accomplished; these incisions, before and behind, are carried into the vagina, when a Kelly's or Polk's clamp is introduced through the vagina, as close as possible to the uterus, its points reaching the ligature already tied in the broad ligament. As soon as properly applied it is closed, and its fellow clamp inserted upon the other side, when the uterus is quickly cut away with curved scissors. The pelvis is irrigated and the abdominal wound closed, and drainage made through the vagina, as in cases of vaginal hysterectomy.

The clamps are removed in forty-eight hours. The operation can be made in twenty-five to thirty minutes, being much easier than even vaginal hysterectomy with clamps. By the rapidity allowed and by the good drainage secured, Dr. Lanphear thinks this operation can be done almost as safely as an ovariotomy—certainly as safely as a vaginal hysterectomy; and it is much preferable to any method which leaves a pedicle or stump behind. He finds it is not necessary to unite the bladder to the rectum as union takes place just as quickly without sutures as with them.

Specific Medication.—Salix nigra is indicated in nocturnal emissions accompanied with lascivious dreams, also in cases of spermatorrhœa in robust and well-nourished patients. The remedy allays irritation of the entire sexual tract, relieves and soothes an uncomfortable, sometimes distressing, mental apprehension of failing virility, and restores vigor to depressed nerves.

Ignatia is indicated in sexual irritation and debility in the female; it allays unpleasant sensations of nervous origin without organic lesion, improves the tone

of the generative apparatus, and replaces morbid longing by healthy conditions.

Saw palmetto will relieve prostatic irritation, and prevent the appearance of mucous discharges with the urine. It does not reduce the size of an enlarged prostate, but allays many discomforts dependent upon that condition.

Pulsatilla is indicated in hysterical and and other nervous states which appear at the menopause; but care must be taken in its use for fear of causing extreme hemorrhage.

For the hemmorrhages of a passive native and painful uterine contractions which frequently attended the "change of life," I have found the following of use;

R—Tr. ol. cinnamon oz. j., simple syrup oz. j., morphia sulph. grs. j. Dose, teaspoonful every two or three hours until releived.

The editor of a Physio-Medical contemporary resents with indignation the statements of certain London and Edinburg scientists, that, lobelia will kill a hog. The editor says he has used the drug for twenty years, and thinks he ought to know.—*Eclectic Med. Jour.*

THE VALUE OF ARISTOL IN CATARRHAL AFFECTIONS.—During the final days of winter and the early weeks of spring, when catarrhal affections of the respiratory passages are an equal source of worry to physician and patient, aristol does excellent work. Dr. Porteous writes (*Am. Therapist*): "Aristol in post-nasal catarrh and hay-fever has acted well in my hands. After thoroughly douching the nasal and post-nasal passages; also the pharynx, with some antiseptic lotion, I apply to all available parts the powder. In no cases have I seen failure." Aristol has been equally successful in catarrhal maladies of the ear, even after the lesion has progressed into the most unsatisfactory morbid conditions. Dr. W. Byrd Scudder writes (*Ec. Med. Jour.*, Jan. 1893): "In a suppurating middle ear where most of the membrana tympani has sloughed away, aristol may be blown in to perfectly coat all unhealthy tissue. I used it in a case of necrosis of the bones of the canal with excellent results." Dr. R. H. Gibbons recommends aristol (TIMES AND REGISTER, Dec. 10, 1892), in a great variety of conditions calling for surgical treatment. He adds: "I have resorted to the use of aristol in the dressing of surfaces in the cavities of the body, those of the ear, the nose, the vagina and the rectum." His results, he writes, "have been satisfactory to an extreme degree."

NEW METHOD OF TREATING FRACTURED THIGH.—At the Medical Society of London, Mr. C. B. Keetley explained a new operation for maintaining the fragments in position after fracture of the femur. The operation consists in passing long steel needles through the fleshy parts into the respective fragments of bone. Mr. Keetley exhibited a case treated by the above method, and pointed out that little or no irritation was caused by the presence of the needles, and he claimed to have provided a means of combating the tendency to shortening in a class of cases in which it was otherwise almost unavoidable. Mr. Jonathan Hutchinson demurred to the proposal on the ground that the long splint, if properly applied, secured good union with a minimum of shortening. The operation is one that might be necessary in certain cases, when the fragments cannot be kept in position, but in the large majority of cases good results may be ensured by using the long splint.—*Hosp. Gaz.*

HOWITZ, of Copenhagen, reports success in treating a case of myxœdema by the use of a calf's thyroid gland as food. The gland was cleaned, cooked, hashed and made into a paste with the water in which it had been cooked. Four lobes a day were given at first, and, later, two lobes every other day. Improvement was noted in three days. An attack of urticaria occurred whenever the gland was taken. Vermehren has taken the glycerine extract of the gland, precipitated it with alcohol, and given the precipitate in pill, in doses of two to five grains; obtaining effects identical with those of Howitz.

SORE NIPPLES.—Marx objects to such manipulation before confinement as may remove the epithelial covering, as this protects the nipples. He advises also a

pad of absorbent cotton as a further protection, and forbids the use of corsets. When sore nipples develop, elevate the breast, nurse less frequently, apply five per cent. cocaine solution before nursing, and icthyol lanolin ointment when there are no fissures. For the latter, cauterize and apply aristol or balsam Peru. For mastitis fix breast and arm immovably, apply to breast iced lead water and give iodide and Rochelle salt internally.—*Med. Age.*

Rules for Passing the Sound.—1. Place the patient in the reclining posture, and make the flexures described—at least flex the thighs.

2. Lubricate the urethra by injecting alboline, or some refined oil; if the oil is not cocainized and it is desirable to use cocaine, it should be first applied.

3. Make the urethra tense by traction.

4. Avoid force; go slow; be patient.

5. Guide the instrument if obstructed in the deep urethra, by the finger introduced into the rectum.

6. All instruments are to be made surgically clean and perfectly smooth.—Daggett, *Buffalo M. & S. Jour.*

Treatment of Phthisis by Injections.—

Guaiacol,	ʒj;
Iodoform,	gr xx;
Olive oil, Vaseline,	ʒiss.

One to three injections daily over the scapula.

Treatment of Palmar Sypehlides.—

Calomel,	ʒj;
Lanoline, Axonge,	ʒs

Rub in each night at bedtime and put on gloves.

Cadogan-Masterson in a special article on enteric fever, says that in 1870, an English physician treated 170 cases with sulphurous acid, with but one death, and that, of a broken-down drunkard. To relieve the tympanites, he uses turpentine in starch enemas. He lays great stress on the diet, giving only such food as cannot pass into the bowel in the solid form. The white of egg is the perfect food here. "The two factors which make enteric fever fatal are not pathological but dietetic: milk and beef-tea."

Brain Itch.—Bremer (*Review of Insanity*) mentions several cases of pruritus dependent on central nerve lesions, associated with mental aberration or with neurasthenia. For this and all other forms of pruritus he recommends the warm bath, with starch and soda.

News.

Leprosy is spreading in Canada.

Dr. E. F. Brush, is Mayor of Mount Vernon, West Chester Co., New York.

Crandall describes (*N. Y. Polyclinic*) the case of a new born infant affected with tertian ague.

Compulsory notification of infectious diseases cost the City of Aberdeen over $3000 for the last half of 1892. An epidemic of measles occasioned the heavy outlay.

Sir Dyce Duckworth objects to the substitution of the term appendicitis for typhlitis. He says the former word is an "Americanism." And to think that we have been using the word right along!

Brown-Séquard says that injections of testicle juice have proved very successful with a case of uterine cancer.

Harriet Hubbard Ayer is in an insane asylum, suffering with melancholia.

Lewin objects strongly to circumcision as a sanitary measure. By removing the prepuce the glands of Tyson are lost, the fat is lost and there is a resistant cicatrix left. The Bible does not refer to the operation as conducive to health, but was at first only a compromise with Moloch for the sacrifice of the first born. As a religious rite it is a relic of heathenism; as a hygiene measure it is injurious; while as a prophylactic, it is a measure designed to encourage illegal sexual intercourse.

Dr. Cass Hamilton, of Cleveland, has been held on the charge of causing the death of Mrs. Smythe by morphine. The doctor is said to be an heir under her will.

The Tabernacle, presided over by Talmage, is in financial difficulties, and he says it must have help or stop. Why does he not apply to Keeley? Talmage gave the gold-cure a great advertisement, and Keeley ought to show a decent sense of gratitude, all the more since the unblushing endorsement of arrant quackery was not calculated to induce sensible people to contribute to the Tabernacle.

Chicago is very anxious to disguise the disagreeable fact of the prevalence of typhoid fever at the present most inopportune moment. It seems that last year the number of deaths at Chicago from this cause amounted to 1479, while in New York, with a population half as numerous again, the number did not exceed 400. Visitors who escape typhus at New York may therefore succumb to typhoid at Chicago and *vice versa*. This is hardly an encouraging prospect! —*Med. Press.*

To Suppress "Vaseline."—Doctors should not prescribe nor druggists order cosmoline, vaseline, densoline, saxoline, petroline or any other *line* hitched on to some prefix. Petrolatum is the proper name, the official name if you please, the name given by the Pharmacopœia, and petrolatum is the name that should be used when you desire to designate the refined residue left after the distillation of the more volatile parts of petroleum.—*Indiana Pharmacist.*

Some Queer Trades.—There exist many odd trades concerning which the most absolute ignorance prevails on the part of the public. There lives in Philadelphia an old Frenchman who has followed the same trade for over a quarter of a century. The signboard over his door bears the simple legend "M. de Blanque, Parfumerie." He runs this little shop principally as a decoy, for he has found it necessary to ply his queer trade "on the quiet." In a rear room the walls are decorated with skeletons in all sorts of grotesque positions. Four hideous skulls grin from the posts of the bed, and close by stands a skeleton with arms outstretched, doing duty as a clothesrack, the room being lit by a lamp made of a skull which is suspended from the ceiling with thongs of tanned human hide. When the Knights of Pythias were organized some years ago the demand for skeletons increased, as they were used to a great extent in the lodgerooms. De Blanque prospered, as a consequence. The price of skeletons varies according to their degree of hardness and whiteness. The genuine imported article costs anywhere from thirty to thirty-five dollars, and the domestic twenty dollars, but the trade is about lost to this country, because they can set up a skeleton so much cheaper in France. There are old-teeth dealers who sell the product of many aching jaws to these articulators for as much as a dollar a quart. They have often to buy more than this to get a tooth to suit, for a skeleton with a full set of teeth is worth half again its value otherwise.

Pan American Congress Bulletin (*Section on Medical Pedagogics*).—The Pedagogic section will devote its attention especially to the history of the development of medical education in America.

In the papers presented by leading teachers recent advances in methods of instruction will be considered.

The *art of teaching*, which is regarded as a study of great interest in other branches of learning, has received hitherto but little attention from the medical profession.

The section in medical pedagogics will therefore be made a prominent feature of the Congress and it is hoped that those interested in medical education will cooperate in the work of this section by being present and by actively engaging in the discussion of subjects presented.

Any inquiries or communications may be made through the secretaries undersigned:

J. Collins Warren, M.D., Executive President, Boston, Mass.; Charles Scudder, M.D., English Speaking Sec'y, Boston, Mass.; Wm. F. Hutchinson, M. D., Spanish Speaking Sec'y, Providence, R. I.

SUPPLEMENT.

THE MILK BILL.

[The following editorial appeared in THE TIMES AND REGISTER, March 4. So much interest has been manifested in this bill, that we have been requested to reprint the article, the original edition having been exhausted.]

THE bill now before the Pennsylvania Legislature for the regulation of the milk supply, presents some features that demand more than a passing notice. That any legislation tending to secure purity and excellence of this product is commendable, needs no demonstration; but it is seriously questioned whether the present bill is calculated to do this. The Philadelphia Milk Exchange has protested against it, denouncing the proposed Act as oppressive, unwise and discriminating. We will look at the bill in detail, and see whether this language, is warranted.

The first section provides that all producers and dealers must procure licenses. This places upon every farmer, who desires to sell milk, the tax of a license fee, as well as on every vender. It also creates a new and numerous class of officials, in the shape of inspectors, to be supported by the community.

Section 2 provides further that no producer or vender shall offer for sale or have in his possession any milk coming from an unlicensed producer or vender. This seems to shut out completely the product of the Jersey dairies, unless that State passes a similar law. As there is no qualifying clause as to the knowledge or ignorance of the vender, he will be compelled to decline any milk offered, unless the farmer carries his license to market with him; and even then the vender is liable, as the licensed farmer may sell the customer milk that has come from unlicensed herds. The vender is, therefore, compelled to rely on the honesty of the producer, and by so doing puts himself in danger of violating the law; though guiltless of wrong intent and powerless to avoid the wrong-doing through any exercise of fore-thought.

Section 3 extends the liability to employees.

Section 4 provides penalties for infractions of this law. These consist of fines, up to $500, and imprisonment up to one year, with the utter ruin incurred by the publication of the sentence in the newspapers. And all this liability is incurred by *unknowingly* having in possession a pint of unlicensed milk! Should the law pass in its present form, there will be some milk routes for sale.

Section 5 places the appointment of milk inspectors, analytical chemists and dairy inspectors, in the hands of the Director of Public Safety, the local health boards, or the burgess, with as many assistants as the appointing power considers necessary. The chief dairy inspector must be a "vet." or a doctor of medicine, and he may hold both inspectorships at once. Salaries are to be fixed by the mayor and councils, or the burgess and aldermen.

The value of such a privilege of unlimited appointments in case of a close election is at once apparent. Ward primaries could be readily regulated by the appearance of a few hundred extra "milk inspectors."

Section 6 forbids, under heavy penalty, the sale of skimmed milk under all circumstances, whether alone or mixed with whole milk, whether sold as whole milk or simply for what it is; also milk from cattle fed on distillery products, or from diseased cattle, or milk not up to the legal standard. Just why the people

should be deprived of the privilege of buying skimmed milk if they want it, is not easy to determine. Invalids for whom skimmed milk has been prescribed, as in Weir Mitchell's diet for Bright's disease, must get a special permit to live, we presume.

Section 7 prohibits the sale or possession of condensed milk that has less than 25 per cent. of fat, or of milk that has less than 12½ per cent. of milk solids, of which at least 3½ per cent. must be butter fat.

Section 8 places the officials appointed under the act under the control of the local health authorities.

Section 9 empowers the officials to take samples for testing.

Section 10 orders licenses to be taken out, within thirty days after the appointment of an inspector, for each place of sale or storage and for each vehicle used for vending milk. The premises must be inspected and their hygienic condition approved before the license is issued. The license may be refused or revoked by the authorities for violation of the law. The license fee for store or dairy is ten dollars per annum, and for each vehicle, five dollars per annum.

Section 11 places the officials, in places where there is no local health board, under the control of the State Board of Health.

Section 12 gives to the officials the right of entry as far as needed to carry out the law, directs them to report promptly, and to examine from time to time all milch cattle for tuberculosis or other infectious diseases.

Section 13 provides that any diseased animal must be segregated, and prohibits the sale of its milk or flesh under penalty.

Section 14 appropriates $50,000 for the purpose of carrying out the Act; and also provides for valuing and paying for any animal condemned as tuberculous, the limit of value being placed at $40. If the animal when killed proves to be tuberculous, one-third the assessed valuation is to be paid the owner. If the autopsy shows the diagnosis to have been wrong, the whole sum is to be paid the owner. This extraordinary provision gives the inspector the right to slaughter the most valuable animals on suspicion, the State paying $40 each if no infectious disease is found.

Section 15 orders the registration of dairies within thirty days after the appointment of an inspector, the fee being $1.00.

Section 16 directs the name and registry number to be affixed to every milk can and vehicle.

Section 17 forbids interference with the inspector, and counterfeiting his seal; while the last section gives June 1, 1893, as the date at which the law goes into operation.

As a whole, the bill appears to us to be objectionable in many points. It renders the dealer criminally liable for circumstances over which he can have no control. This will tend to place the business in the hands of the less scrupulous dealers; to the detriment of the consumers. It will greatly limit the supply of milk, as but a small portion can be furnished at the legal standard.

Whenever the milk of any dairy falls below the standard, it must be destroyed, as the bill forbids its use, even for animals. The supply will then be variable and uncertain, as any dairy is liable to find its milk occasionally below the legal limit. This, and the expense incurred by the provisions of the bill, must vastly increase the cost of milk to the consumer. The total prohibition of the sale of skimmed milk and of buttermilk has no warrant whatever in public policy. Both these are valuable and wholesome articles of food; and their use meets with no objection that cannot equally be urged against the use of milk and its products in every form. The provisions for slaughtering suspected cattle place in the inspector's hands the power of destroying the most valuable herds, with no compensation worthy of the name; a power that may be used to gratify private enmity or to favor extortion. The provisions for the appointment of inspectors place in the hands of a few officials a privilege of enormous efficacy in practical politics, but equally objectionable to the interests of the community. The whole measure is calculated to foist upon the consumers, the farmers, and the dealers in milk equally, a burden that neither class could bear; and we will be greatly surprised if a Pennsylvania legislature can be found that will impose such a law upon its constituents.

ROYAL COLLEGE OF PHYSICIANS OF PHILADELPHIA
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Original Articles.

ON SOME OF THE TROPHO-NEUROSES ASSOCIATED WITH ABNORMALITY OF THE THYROID GLAND.[1]

By SOLOMON SOLIS-COHEN, M. D.

[Professor of Clinical Medicine and Applied Therapeutics in the Philadelphia Polyclinic, etc.]

DR. SOLOMON SOLIS-COHEN reported and exhibited photographs of two cases of akromegalia, in both of which there was apparent absence of the thyroid gland, and marked skeletal changes in addition to those in the face, hands, and spine. The patients were males, one twenty-five years of age, the other fifty-one years old. In neither case was there any eye-lesion. The case of the younger man had been previously reported to the College of Physicians. In the elder man headache, drowsiness, forgetfulness, thickness and scanning of speech, and excessive polyuria were present. The symptoms had been partially relieved by picrotoxin, the headache especially. This drug was a vasomotor regulator and useful in many of the conditions to be discussed. It was necessary to say "apparent absence" of the thyroid gland, because only *post-mortem* could absence or atrophy be unqualifiedly affirmed. Embryologically the pituitary body and thyroid gland were intimately related, and it appeared not improbable that the enlargement of the former and the consequent hemiopia and other cerebral symptoms noted in some cases of akromegalia might be due to an attempt by nature to supply the absence of an important structure by compensatory hypertrophy of an allied structure.

A number of cases in which the thyroid gland could not be demonstrated and which presented some, but not all, of the changes found in typical cases of akromegalia were likewise related. In one such case the hands and ears presented marked local asphyxia (Raynaud's disease), while the pain and transient redness developed in the feet upon exertion were suggestive of the condition described by Weir Mitchell under the name of erythromelalgia. In another case, in an aged man, there were cardiac lesions and muscular tremors, with wasting as in progressive muscular atrophy.

Other cases observed by the speaker in which thyroid atrophy apparently existed were: One case of hypertrophic osteo-arthropathy with emphysema and fibroid phthisis, in a man fifty years of age; one case of scleroderma with cardiac lesions, muscular tremors and mental changes in a woman apparently quite aged, who insisted, however, that she was less than forty years old; and one case of unilateral spontaneous gangrene and ulceration of the toes and leg (Raynaud's disease), with bilateral spasmodic vascular phenomena in a woman over sixty years of age. In the latter case

[1] This paper is for the present withheld from publication in full, and is abstracted for the Transactions of this Society as a preliminary communication.

[Read before the Philadelphia County Medical Society February 8, 1893.]

certain changes in the fingers and nails existed, which in one finger resembled those of akromegalia, in another finger those of rheumatoid arthritis, in another finger those of sclerodactyle, the nails of all the fingers being curved like those of the hippocratic finger, as in pulmonary hypertrophic osteo-arthropathy. That this latter condition of the nails and finger tips could be ascribed to interference with nutrition through the circulation was held to be shown by the occurrence in cases of cardiac disease without pulmonary or obvious nervous lesion of fingers indistinguishable, and of which pictures and tracings were exhibited.

Taking up conditions of trophic and vascular disturbance associated with enlargement of the thyroid gland, Dr. Cohen briefly alluded to exophthalmic goitre, myxœdema and cretinism, laying stress upon the fact that as, on the one hand, in akromegalia there might be enlargement instead of apparent absence or atrophy of the thyroid gland, so, on the other hand, in myxœdema and cretinism, the goitre might be lacking, while experimental thyroidectomy, as well as the *cachexia strumipriva* that followed surgical extirpation of the gland, proved that the symptoms were due to a functional atrophy of the gland, whether or not there was hyperplasia of the non-essential anatomical elements. Stress was laid upon the varied vasomotor disturbances in all these marked conditions.

In one case of Raynaud's disease an affection, which, so far as the vasomotor phenomena are concerned, is almost an antithesis of Graves' disease, Dr. Cohen had observed in an anæmic girl, with occasional tachycardia, an intermittent enlargement of the thyroid, just as is observed in certain cases of exophthalmic goitre, and in certain ill-defined cases for which he had proposed the name of *vasomotor ataxia*, which latter could not be called exophthalmic goitre, but in some instances might readily develop into that condition. These latter cases, observed both in males and females, but principally in the latter, and in hysterical subjects more often than in others, showed as an almost constant feature the intermittent presence of hæmocytes in the urine; sometimes, but rarely, transient or intermittent albuminuria, as well. In some cases lithuria and oxaluria had been noted, especially in those of rheumatic, gouty, or diabetic families; still more rarely casts or cylindroids had been found. These observations were related with the occurrence of hæmoglobinuria in Raynaud's disease, and of hæmaturia and other hemorrhages, such as purpura, hæmoptysis, and hæmatemesis, all of which the speaker had personally witnessed in Graves' disease; as well as with the occasional albuminuria of the latter, and the polyuria, albuminuria and glycosuria of myxœlema and of akromegalia, and the morbid perspiration and localized œdemas and flushes of all these conditions, and of angio-neurotic œdema —in which latter condition he had also found hæmocytes in the urine during and after paroxysms affecting the throat in one woman and the arms in another. In some of his cases of vasomotor ataxia, a condition which varied much in its severity, from but slight abnormality to such marked affections as those associated with the names of Graves and Raynaud, the author had observed hæmatemesis, with symptoms suggestive of gastric ulcer, anæmia, menstrual irregularities, migraine, transient localized œdema, transient local blushing, permanent dilatation of isolated groups of capillaries and venules, stigmata, local syncope, erythema nodosum, and urticaria; in one case there had been transient blindness. In two other cases, in which, however, no thyroid abnormality had been detected, there had been membranous enteritis. Subjective and objective coldness of the knees was marked in one case in which the thyroid was enlarged. In another case, the first observed by Dr. Cohen in a male, there had been great rapidity of the heart's action and intermittent goitre as well, so that the case might well have been called Graves' disease, and doubtless belonged positively in that category. Strictly circumscribed erythema, and factitious urticaria could readily be produced in all these cases by writing upon the skin with a probe, or in some instances applying cold to the part. In a colored woman with exophthalmic goitre the effect was almost startling.

The connection of rheumatism with Graves' disease, and the heredity of both, was too frequent to be a mere coincidence.

In certain cases of rheumatoid arthritis the thyroid gland was found to be enlarged, and tracings were shown of the fingers of an old man with rheumatoid arthritis and arthritic muscular atrophy, in which the parrot-beak pad and nail were shown in the terminal phalanx of the thumb, which was hyper-extended, while the sharpened and atrophied terminal phalanges of other fingers resembled sclerodactyle, and were almost identical with the tracings from the case of Raynaud's disease. Allusion was made to the tetany of thyroidectomy and the tremors of exophthalmic goitre, some cases of myxœdema, the speaker's cases of scleroderma and of Raynaud's disease, and some of his cases of vasomotor ataxia; as also to the occurrence of phenomena like those of Raynaud's disease in certain cases of scleroderma, the anæmia and the extreme susceptibility to cold, which was a feature of all the conditions described. To complete the list of associations observed, and admitting that they might be coincidental, there were many reported in connection with the occasional occurrence of epilepsy in Graves' disease, two cases of the speaker's, in one of which *petit mal* had developed in an anæmic girl with enlarged thyroid and occasional tachycardia, and in the other, a male, with enlarged thyroid, tachycardia, and flushed face accompanied the epileptic paroxysm. The not infrequent termination in phthisis of many of the conditions alluded to might have no other significance than impaired nutrition, but the recent observations of hæmoptyses occurring only during paroxysms in one case of epilepsy without appreciable pulmonary lesion, and in one case of local asphyxia with but trifling signs on the chest and a few tubercle bacilli in the sputum, had suggested the thought that vascular disturbances in the lung might be the determining factor. Finally attention was called to the success of various observers in treating myxœdema by implantation of a thyroid gland, by injections of thyroid extract, and by feeding with fresh thyroids. It was suggested that the same treatment might be of benefit in many of these varied conditions narrated.

The speaker desired to avoid premature assertion of causal relationship, and had therefore made use of the words "associated with," rather than "dependent upon" abnormality of the thyroid gland, in describing the trophic, neurotic, and neuro-vascular phenomena discussed; some of the complicated associations he had been unfortunate enough to meet with were doubtless purely fortuitous. The tendency of diagnosticians was naturally to discriminate among groups of phenomena presenting similarities, and thus to divide rather than unite. Nevertheless, the student of pathology in its broad sense, must be on the alert for commonalty of phenomena, and certainly the very variety of the nutritional disturbances associated with abnormalities of the thyroid gland indicated a profound relationship among them, dependent upon the important metabolic functions of the gland.

The researches of many observers, in particular of Horsley, had demonstrated this metabolic importance, and that the secretions of the gland acted in the organism in some way. Dr. Cohen believed that they were in truth chemio-tactic or regulatory, and that individual constitution, heredity, environment, habits, and the like, determined the particular direction in which failure of their function would be manifested. Most certainly an intimate relation existed between the thyroid gland and the visceral nervous system, more especially the vasomotor mechanism. Of course, under the conditions, it was difficult to separate primary from secondary phenomena—the mediate results of the train of action of a mechanism from the immediate results of the influences that had set the mechanism in action. The main purpose of the paper was to suggest more common observation clinically and at autopsies of the thyroid gland, so that sufficient data might be collected by a number of observers in order to determine what is accidental and what essential.

DISCUSSION.

Dr. W. S. Carter: I should like to mention a case that was brought to the University Hospital, a cretin coming from the interior of the state. The child was five years of age, born of healthy parents. It was one of three children, but the others were healthy and without

nervous disease. There was apparent atrophy of the thyroid gland. The child had a large head, a general condition of myxœdema, also a greatly enlarged tongue, and the face was especially involved. It was an idiot. The muscles were poorly developed, and the child was unable to stand alone, and muscles of neck did not support the head. A diagnosis of cretinism was made by Dr. Griffith, who saw the case.

PULMONARY TUBERCULOSIS.

By HERMAN D. MARCUS, M. D.
[Resident Physician, Philadelphia Hospital.]

THERE is probably no disease which has been more fully discussed of late years than tuberculosis; none which is more dreaded and more common.

Phthisis pulmonalis has undoubtedly caused a greater death rate than any other disease.

Since the discovery of the "bacillus" by Koch it has been the aim of all pathologists and clinicians of renown to discover some specific, both prophylactic and curative;but thus far only failure has marked their labors. When some two years ago, Professor Koch, of Berlin, astounded the medical profession by the announcement of the discovery of "tuberculin," everybody began to "invent" or "discover" a new remedy.

Unfortunately Dr. Koch's announcement was misapprehended, and whereas he did not claim to cure pulmonary phthisis, reports began to circulate that tuberculin stands in the same relation to phthisis as the bovine virus to small-pox. No such claim was ever made by its discoverer, and when subsequently the medical profession began to realize their error,none would shoulder the blame,but all were in unison in condemning the great bacteriologist. Like a skyrocket it illuminated the heavens only to return to earth an exploded and discarded phenomenon.

How unjust such a procedure was is easily understood. Dr. Koch's labors were not in vain, for his announcement gave the stimulus to others to look more deeply into the subject and exert their knowledge to partially put a stop to the progress of this disease.

Pulmonary tuberculosis once affecting the human body marks its course by a series of symptoms easily recognized. If we receive the sufferer at the very start we may be able to do something to check its progress. But then it is only rarely that the patient applies to us at the onset; and a little "cold," a little dry cough, are only too easily overlooked.

Only when such symptoms as marked wasting, excessive night-sweats or perhaps hemoptysis appear, then the patient will put himself under a physician's care. Too often it is too late, or if not too late the patient is unable by pecuniary circumstances to follow out his physician's directions.

Recognizing in the first place the influence of climate on the progress of this affection, our first aim must be to recommend such places for habitation which are most conducive to our patient's health. A dry, high and warm climate, wherever such may be found, should be chosen. California has been greatly lauded as a resort for consumptives, and I fear that too much has been said in its favor. True, there are places which exert a very beneficial effect on this class of patients, but the name California is undoubtedly too far reaching in its meaning. Some cities in that state are anything but advisable as health resorts for consumptives, others are to be recommended during the summer and others again are preferable in the winter.

There are only a very small proportion of our patients who are financially able to live in one place during the summer, in another during winter. The greatest number of our patients are rather such, as, owing to their financial standing, are unable to leave their home, or establish a new home in the far West. There are a number of places in our immediate neighborhood which may be found acceptable and beneficial.

Another very important factor in the treatment of phthisis is its debilitating influence. We have remedies at our command which, if properly employed, may prove of the greatest benefit to those of our patients who are unable to accept our recommendation of a change of residence. Undoubtedly cod liver oil is one of them. The *pure* oil, given in doses of a tablespoonful three to four times daily, exerts marked influence on the wasting properties of this disease.

A great many of our patients look upon cod liver oil with the greatest abhorrence, and, in fact, the very mention of cod liver oil may cause nausea to some oversensitive persons.

For such patients, I have been in the habit of prescribing Wampole's preparation of cod liver oil, and found it give excellent results. The dose is about a tablespoonful four times daily.

There are other preparations of cod liver oil on the market, but the above preparation embodies in its formula such remedies as are found efficacious in the treatment of the disease.

Besides cod liver oil, we have a number of other very important agents valuable in the treatment of phthisis, such as creosote, hypophosphites, and malt preparations, and a great many others too numerous to mention.

Creosote may be administered in capsules containing from two to fifteen minims three to four times daily.

Hypophosphites make an excellent substitute for the pure oil during the summer months, and malt, when administered, will prove very beneficial, owing to its marked tonic properties.

Regarding its symptomatic treatment, we have a number of remedial agents which have proven of value in checking the progress of this disease. For the hemoptysis, various styptics are recommended, such as gallic acid, ergot, sulphuric acid. Ice or blisters over the chest have also proven beneficial.

For night sweats, atropine gr. $\frac{1}{120}$ or gr. $\frac{1}{80}$, and sponging, have proven of great value.

Diet and rest are agents which, to the poor working man, are even more difficult to obtain than climate. Whenever possible, a light, nourishing diet, and unstinted rest, combined with the agents mentioned above, will tend to improve the general tone of the consumptive and help him, if not to combat the disease in its entirety, to at least stay its progress, and thereby prolong life.

The Franklin Sugar Refinery has obtained permission to establish a hospital near the refinery, for the prompt treatment of any of its employes who may be seized with cholera next summer. Ominous.

Annotations.

THE *American Journal of Insanity* for January contains a number of communications concerning the advisability of performing such operations as oöphorectomy upon the insane. The discussion appears to have been prompted by the performance of six operations at the Norristown Asylum. There is great divergence of opinion on the subject, Dr. Morton and others objecting strongly; and Dr. Goodell writing as follows: "I believe the whole business of removing the ovaries for any purpose has been horribly abused." Dr. Alice Bennett states that, of the six operations mentioned, all were for serious disease of the ovaries or tubes, such as calls for, and daily receives outside, surgical interference, quite aside from any question of mental symptoms. In each case the diagnosis was confirmed by the condition of the parts removed. The consent of the nearest relatives was always obtained. Results: Three are completely restored to bodily and mental health, one is physically restored, is very strikingly improved mentally and will probably recover; one, a puerpural epileptic, is improved as to epilepsy but not much mentally; and the sixth died of peritonitis.

In our opinion Dr. Bennett has the best of the argument. The reasons for operating are sufficient, the results brilliant, and the objections to castrating insane women less valid than with others, as it is for the good of humanity that they should not bring into the world a neurotic progeny. That they cannot give legal consent to the operation is an argument of little weight, as it would apply equally to every measure taken for the treatment, of the insane beginning with their detention. It is to be hoped that this promising field will be fully explored, and that the investigators bold enough to venture into it will not be deterred by an outbreak of misplaced conservatism.

A resolution has been introduced in the Texas Legislature providing for the appointment of a homœopathist on the faculty of the University. One of the disadvantages of state control of medical teaching.

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A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,

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THE MILK BILL.

The *Ledger* and other papers credit Dr. E. O. Shakespeare with the astonishing statement that skim-milk contains but one-tenth of one per cent. of nutritious material. Although he has not disavowed the remark, we are confident that Dr. Shakespeare was misunderstood. As this allegation is being used to further the passage of the bill, however, it will be well to note how widely the statement departs from the truth.

Pavy (Food and Dietetics, p. 121) gives the following as the composition of skim milk:

Nitrogenous matter,	4.0
Fatty matter,	1.8
Lactine,	5.4
Saline matter,	0.8
Water,	88.0
	100

This, it may be noted, is not a minimum, nor even an average. It is an exceptionally rich skim milk that retains nearly two per cent. of the fat.

Henry Trimble (*American Dairyman*) found the average of all published analyses at his disposal to be 10.23 per cent. of total solids, of which 0.45 was fat. His own analyses gave an average of 10.88 per cent. total solids, of which 0.64 was fat. He says: "We have therefore in skimmed milk all the constituents necessary to support life, at an average cost of 3½ cents per quart. In each quart there are 3¼ ounces of dry nutriment, which would make a pound of the water-free nutriment cost just 17 cents."

This is sufficient to show that in skim milk we have a cheap and nutritious food, to which there is no objection, so long as it is sold for what it is, and is not used as a substitute or an adulterant for whole milk. The total prohibition of the sale of skim milk is not justified by any motives of public utility, although certain interests would be favored. The cake and cracker bakers would be unable to secure the skim milk at a low price, and the demand for whole milk, and consequently its price, would be increased; while, on the contrary, the general use of skim milk cheapens the cost of whole milk, cream, and butter.

So important is skim milk to the cracker bakers that the passage of this law may drive them out of the State.

Throughout the bill under discussion the mistake appears to have been made, of exacting a high or average standard for the minimum. Thus, while the mean percentage of solids in the Paris[1] milk is 13, with 4 per cent. fat, the lowest permissible for total solids in 11.5, of which 2.7 must consist of fat The English Society of Public Analysts[2] recommended that the limit for total solids should be 11.5 per cent., of which 3 per cent. must be fat. The standard of this society previously was[3]:

Specific gravity	1.030
Ash	0.70
Solids not fat	9.00
Fat.	2.50
Total solids	11.50
Water	88.50

[1] Bulletin No. 24, U. S. Department of Agriculture, Division of Chemistry, page 152.
[2] The Analyst, Dec. 1885, page 217.
[3] Food Adulteration. Battershall, 1887 pp 59.

Battershall[1] also gives the legal standard for New York as 12 per cent. of total solids and 3 of fat; for Massachusetts, 13 per cent. of total solids; for New Jersey, 12 per cent. These figures refer to whole milk exclusively.

The bill calls for a minimum of twenty-five per cent. of fat in condensed milk. This is doubtless intended to prohibit the use of condensed milk altogether, as nothing like this percentage of fat is found in any brand of which we have analyses. Battershall[2] gives the composition of condensed milk as follows:

	American	N. Y.	Grand Milk Co.	Eagle.
Water	52.07	56.71	55.43	56.01
Fat	15.06	14.13	13.16	14.02
Sugar	16.97	13 98	14.84	14.06
Caseine	14.26	13.18	14.04	13.90
Salts	2.80	2.00	2.53	2.01

To obtain the fat percentage required by this bill, it is obvious that fat must be added; as no milk, with the possible exception of the Alderney, could furnish that proportion unless when evaporated to a water free powder. If this bill become a law, condensed milk as we have it now, can no longer be purchased in Pennsylvania. That the law is prohibitive is seen in the fact that milk condensed to the powdered form has never been successfully produced, and cannot be found in the markets to-day. In the preparation of the best milk foods, where dried milk is mixed with starchy substances, it has been found impossible to retain the fat of the milk, as it soon becomes rancid. To overcome this difficulty the manufacturers have been compelled to use skim milk, and make up the percentage of fat with cocoa butter. They state that a rich reward is waiting for the person who will discover a method of retaining the natural milk fat in a preparation that will keep so as to allow it to be marketed. If a condensed milk can be produced that will pass muster under this bill, it will yet remain to be demonstrated that such an article is as wholesome or as palatable as the ordinary condensed milk.

Suppose this bill becomes a law, what will be the course rendered necessary to law-abiding citizens, who desire to continue in the milk business, and yet are unwilling to incur the risk of a *criminal* conviction? The farmer must test every can of milk before shipping. This will require an hour. The dealer who receives the farmer's milk, after satisfying himself that the farmer is registered, and that the milk all came from the farmer's own registered herds, and not from a neighbor's, must test every can again; to be sure the milk is up to the standard. Each employee who goes out with a push cart (each of which pays $5.00 license) must test again, or risk fine and imprisonment. So that two or three tests must be applied to every can of milk, each consuming an hour's time, before the customer can sit down to his breakfast with cream for his coffee. In hot weather, the result will be the development in milk of elements far more dangerous than water. Such an elaboration is simply nonsense; and the certain result of such legislation is neglect. Whether it is wise to enact legal provisions that cannot be obeyed without putting an intolerable amount of restrictions on the business, is for our legislators to decide.

No matter how high the *average* of the milk of any herd, it is liable at times to fall below the standard, and that when the milk itself is pure and wholesome. In wet weather, or when the pasture is luxuriant, or when the cow is fresh, the amount of water in the milk is increased; although the milk is perfectly sound.

It will thus be seen that the present bill is full of crudities; that it is in many respects impracticable, and that its effect would be to greatly decrease the use of

[1] Ibid, p. 60.
[2] Ibid, p. 53.
[3] Food and Dietetics, p. 122.

milk, increase its cost, and drive responsible men out of the business; dealing a heavy blow to the farming and dairy interests of the state, besides saddling them with an expensive and oppressive system of inspection from which they receive no commensurate advantages.

FEMALE PHYSICIANS.

MITCHELL says that nursing and practicing medicine are unwomanly, and that men who are sensitive to womanly ways appreciate this fact. Indeed, it does seem as if in the development of the modern tendency towards manliness in women, it is time to call a halt and inquire "Where are we at?" The liberation of woman from her subordinate position means just what it did to the disenthralled slave. The newly made citizens believed that freedom meant liberty from all obligations on their side, but a continuance of the support and care of their former masters. Woman may become independent; she must then become self-supporting, and must be prepared to defend herself, her property and her rights, quite as man has done. With her feebler frame, her physical encumbrances, her mental organization warped and misdeveloped by the inheritance of ages of irresponsibility, she steps into the arena to contend against her ruder antagonist in the struggle for existence. She deliberately lays down the privileges of her sex and gets—not a fair field, but assuredly no favor.

That this truth is being practically recognized is seen in the changes in female education. The "finishing school for young ladies" appears to be going out, and on all sides are springing up educational institutions designed to afford to girls the same training heretofore enjoyed by boys. The curriculum of Smith's, Wellesley or Bryn Mawr will compare favorably with that of any corresponding school for boys; while co-education is certainly becoming more popular. As women assume the duties hitherto fulfilled by men, the education of both sexes must be the same. Woman, in freeing herself, surrenders her privileges and assumes the burdens and the responsibility hitherto born by man. Whether she gains or loses by the exchange is a question for each individual woman. Assuredly for the upper tenth, of intelligence, the sex is benefited; for the lower nine-tenths, as in the case of the slaves, the first effect is a decided loss. It will be some generations yet before the average freedman will provide for himself as well as did the average master. It will be the same as to the average woman. She must first learn by bitter experience what are the storms and buffets from which her strong-armed protector has shielded her; she must learn that the plea of womanhood is no longer an extenuation of crime or of folly; she must strengthen the body and develop the intellectual faculties, dwarfed and, enervated by protection. She will certainly be able to spare no time for child bearing, and the earliest effect, one already perceptible, of woman's assumption of manly labor, is the abrogation of motherhood.

That these conditions are desirable or not is not the question. The fact remains that the tendencies of our times are in this direction, and we can no more prevent this development of our modern civilization, than we can bring back the days of the troubadours, however charming that might be.

Dr. E. O. Shakespeare has been requested to debate his proposed milk bill publicly by the Managers of the Philadelphia Milk Exchange. Perhaps he could then explain where he secured that skim milk with but one-tenth of one per cent. of nutriment.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

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TUBERCULOSIS: SHADE'S TREATMENT.

HAVING become keenly interested in the subject of the mineral treatment of pulmonary tuberculosis, as enunciated by Dr. Nevin B. Shade, in various articles from his pen, which have appeared in the medical journals during the past few years, I visited the city of Washington, D. C., where the Doctor resides, for the purpose of carefully studying the treatment, and ascertaining its results.

I have to say that, after watching the application of the treatment in a number of cases, and tracing the history of many others in which the diagnosis of tuberculosis was positively established by physical and microscopic examination, I am filled with astonishment at the results obtained; and also with wonder that the potency of a combination of old, tried, and common remedies, capable of achieving such results, has not sooner been discovered.

This distinction has apparently fallen to the lot of Dr. Shade.

I will give a brief outline of the history of two cases, derived from the patients themselves, to illustrate the treatment and results obtained. Mr. B., aged thirty-five years, was taken ill about February, 1891, with la grippe, resulting in pneumonia, from which he did not entirely recover, but continued to cough and expectorate; and, although able to be about again, gradually lost strength and flesh, until, at the time of commencing the mineral treatment, April, 1892, he was reduced in weight from 173 pounds before the attack of pneumonia to 120 pounds. He was unable to leave his room, his limbs were œdematous, and he was entirely unequal to any exertion, perspired excessively at night, was restless and sleepless, had frequent attacks of diarrhœa, and expectorated from three to four cuspadores full of purulent sputa daily.

Such was the physical condition as described by the patient and his friends. At the present time, I find him a moderately stout and well nourished man, weighing 151 pounds, pulse, breathing, and temperature about normal, and no tubercle bacilli in the sputum; he takes active exercise, and is equal to a good deal of exertion, in fact, is attending to active business.

There is a limited area of dullness over the apices of both lungs, but no evidence of active disease, and the expansion of the chest walls has increased, he tells me, by four inches. He states that he can take a protracted, deep inspiration, without inconvenience or distress. He is still under treatment.

The second case is a Mrs. B., aged twenty-five years. She took a severe cold in August, 1889, and had an acute attack of pleurisy; from the acute symptoms of which she recovered, but continued to have trouble with her lungs, and was treated for some time for tuberculosis, under the care of various physicians, her condition steadily becoming more grave and serious.

She had excessive expectoration, bad night sweats, frequent attacks of diarrhœa, no appetite, and her limbs were greatly swollen.

She was unable to leave her room, and was reduced in weight, from 140 pounds at the beginning of her sickness to 90 pounds at the time she was first placed under the mineral treatment in January, 1892.

Improvement in her condition was perceptible shortly after commencing the treatment; and she gradually progressed and improved until now, at the time of my interview with her, when she and her mother gave me this history of her case; she has the appearance of a fairly well-nourished, active woman, able to do a large share of the work of the house, which she and her mother manage together; and now weighs 137 pounds.

She is still using the inhalant part of the treatment.

This patient was also greatly afflicted by the presence of indolent tuberculous ulcers of the skin, which gradually healed under the influence of the remedies.

From what I have seen of the results of Dr. Shade's treatment, and from the knowledge gained through him, of the use and application of the remedies, in the differing diatheses, and susceptibilities of the patients to the influence of the remedies employed, on my return to Albuquerque, New Mexico, I propose to offer the benefit of this treatment to the many consumptives who are now induced to visit that Territory by reason of its curative climate; feeling fully satisfied that the combined advantages of the treatment and of the salubrious climate, already recognized by the profession as the best for consumptives on the continent, will realize results as yet unheard of; the modus operandi of treatment being in direct line with the curative agencies of climate.

R. LUND, M. D.

ALBUQUERQUE, NEW MEXICO, MARCH 9TH, 1893.

A STRANGE FREAK OF NATURE.

ON February 13th, 1893, I delivered a young woman of a still-born babe, a boy, well formed, except the epidermis, which hung in shreds on his hands and feet. The thin skin covering them was red and looked like raw meat (the feet and the ankles, the hands to above the wrists). The cause was alleged to be the burning of the child's grandmother last July, by pouring hot water on her hands and feet. When the mother of the child pulled off the apron, the skin came with it. They claim that the grandmother's hands and feet looked just like the infant's.

Please give your views on the subject; why such things occur; can they be prevented and how?

EMMA HASE, M. D.

QUINCY, ILL.

[The infant's condition as described is what we see in the children of syphilitic parents; and the maceration of the skin is due to soaking in the amniotic fluid some time after the death of the foetus. A strict inquiry will probably show that syphilis in the father caused the death of the child, as well as the lesion of the skin. The grandmother's burn was a coincidence.—W. F. W.]

Book Notices.

PROCEEDINGS OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY. Vol. XII. Sessions of 1892. LEWIS H. ADLER, JR., Editor. Philadelphia. Printed for the Society.

It is doubtful if any other American general medical society can present a volume of transactions as creditable in the quality and number of the articles. The mechanical execution of the volume also deserves a word of commendation.

TRANSACTIONS OF THE AMERICAN ORTHOPEDIC ASSOCIATION. Sixth Session, held at New York, September, 1892. Vol. V. Philadelphia. Published by the Association.

The Medical Digest.

FRENCH NOTES.

Translated by E. W. BING, M.D.,

CHESTER, PA.

A SIGN OF BREECH PRESENTATION.

WHEN, in a woman who has passed the sixth month of pregnancy, a sharp pain is produced by placing the hand on the fundus uteri, it may be almost affirmed that there is a breech presentation. The fact is very frequent, although not constant, being present in about seventy per cent. of cases. The pain is sometimes spontaneous. How is it to be explained? According to Pinard, it is due to the irregular distention produced by the rounded mass of the head. If version is performed, the pain disappears.—*La Clinique Internat.*

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CONTRIBUTION TO THE STUDY OF THE PATHOGENESIS OF ECLAMPSIA.—Epilepsy, eclampsia, and uræmia present a similar series of symptoms. There is the same succession of sensorial and sensory disturbances, of tonic and clonic contractions, of coma, and of abnormal psychical manifestations, whose centre of origin is in the psycho-motor elements of the brain, and in the ganglia. These last may be acted on by factors of different kinds. One of the chief is intoxication, particularly by uræmia. Whether a result of kidney disease, circulatory disorders, or mechanical hindrance to the secretion, in all cases the poison acts on the psycho-motor centres in the same

manner. Poisoning by other agents, as lead, alcohol, mercury, etc., may also show itself by eclamptic attacks. These are in correlation with the infections, which also act chemically on the kidneys —*Von Huff.*

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Opposed to this group of eclampsias produced by chemical excitants is one which can only have its explanation in affections of the vascular or nervous system, it must not be forgotten that certain nervous diseases, such as epilepsy, hysteria, certain psychical disorders, and local alterations of the brain and meninges may give rise to convulsive disorders.

But the kidney changes have not a very great importance, since they are met with in other circumstances without eclampsia resulting. It must be admitted that gestation determines a condition, by which eclampsia is determined more easily than at any other time.

The author thinks that in certain cases insufficient development of the organism and the accumulation or exaggeration of peripheral excitation, brought about by pregnancy, brings about this particular state of the nervous centres.—*Bull. gen. de Therapeutique.*

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Iodol solution:

Iodol,	1 part.
Alcohol, (95%)	16 parts.
Glycerine,	34 parts.

Emulsion for inhalation:

Iodol,	1 part.
Alcohol, (absolute)	4 to 5 parts.
Glycerine,	10 parts.
Water,	10 parts.

The iodol is dissolved in the alcohol by heat and added to the glycerine previously heated to 60° or 70°. To the still warm solution the water is added.

Collodion:

Iodol,	1 part.
Ether,	10 parts.
Gun cotton,	5 parts.

Pomade:

Iodol,	2–10 grs.
Lanoline or vaseline,	10–100 grs.

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Lemanski and Main have made comparative tests on the absorption by the stomach and by the rectum. Their trials covered salicylate of soda, antipyrine, salol, iodide of potassium, turpentine, and methyl blue, with the following results:

Sodii salicylate, by mouth, appeared in urine in 35 minutes; by rectum in 25 minutes.

Antipyrine, by mouth, appeared in urine in 40 minutes; by rectum in 30 minutes.

Turpentine, by mouth, appeared in urine in 45 minutes.

Iodide of potassium, was found in the saliva in 15 minutes after ingestion by mouth, and 10 minutes after rectal absorption.

Methyl blue, 40 minutes by mouth, 1½ hours by rectum.

Salol, in ½ hour by mouth; at end of 4 hours per rectum.

This is probably due to decomposition of salol by the alkalinity of the pancreatic juice.

Conclusions: All substances save certain products, as turpentine and santalwood, may be given by the rectum. Most of the directly soluble products pass more quickly by the rectum.—*Rev. de Therap. Med. Chir.*

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Exophthalmia at Will.—The patient's left eye was deeply set, but by a little effort, it could be rendered very prominent. Compression of the jugulars gave the same result, showing clearly the effect of venous influence. By bending the head backwards the eye again returned to its deep situation. Independently of the venous cause, there was an absorption of the fatty tissue at the apex of the orbit and relaxation of the ligaments: vision was normal.—*La Med. Moderne.*

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Copaiba, either the resin or the oil, is recommended as a diuretic. Georgueresky, of Kieff, reports cases where the secretion of urine was increased from four or seven hundred grammes to 2000 or 2600 grammes by a daily dose of two to four grammes of balsam or oil. The increase occurs at the end of three days, it lasts until the cessation of the treatment. As the urine increases œdema diminishes, respiration improves and hæmoglobin increases. There is no action either on the circulation or the heart, but solely on the renal organs. The only inconvenience is its disturbance of the stomach.—*La Med. Moderne.*

Sudden Death in Laryngeal and Tracheo-Bronchial Lesions.—Dr. P. Caillard has studied a number of cases in which sudden death supervened from laryngeal lesions. The peculiar sensibility of the larynx seems to be the cause of accidents of this kind. In many cases the subjects die before they could do so from insufficiency of oxygen, but as if the vital centers were suddenly overwhelmed. To explain these facts we must compare them to those in which sudden death results from traumatism of the larynx. Brown-Séquard has shown that a blow on the larynx will produce death without the blow being necessarily violent. A sufficient number of observations have likewise shown that the same result may be produced in man, which makes the fact very important in a medico-legal way. Brown-Séquard referred the fact to the influence of inhibition, which he defines to be an act, by virtue of which a property or activity, and secondarily a function or simple action, disappears completely or partially, suddenly or very rapidly, entirely or temporarily, in one or several parts of the organism, at a distance from the point of imitation in the nervous system. The facts produced by Caillard show that all alterations, traumatic or spontaneous, are strong excitations of the laryngeal mucous membrane may cause sudden death. To this may also be attributed the mode of termination which frequently is seen in aneurism of the aorta, and in mediastinal tumors which kill by irritation of the neighboring nerves, the post-mortem appearances alone not accounting for the suddenness of the death. —*Rev. de Therap. Med. Chir.*

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A New Surgical Needle With Bobbin-Attachments.—Montaz showed at the surgical society a new form of needle. It is, curved in a semicircle and inserted into a handle of aluminum. At the point where the shank joins the handle, a spool is attached, at right angles; this spool revolves easily, and the silk is led to the eye of the needle, through a perforated pin which acts as a "tension." The advantage claimed is its adaptability to cases where a number of sutures are required, the continuous supply of silk or other material obviating the necessity of using several needles, with their inconveniences and delays. It is specially adapted for closing abdominal incisions in laparotomy, etc. The spools are made of glass.—*La Medicine Moderne.*

Peptonuria in Scarlet Fever.—Arslan has sought for the existence of peptonuria in twenty-one cases of scarlet fever, and concludes that in the regular progress of the disease this symptom does not exist; but in the irregular varieties it does exist, and sometimes precedes the invasion stage. In the gastro-intestinal forms it is particularly marked.—*La Med. Moderne.*

A New Method of Manipulation for the Replacement of the Lower Jaw When Dislocated.—The patient is seated in an ordinary cane-bottomed chair; the operator stands before him with one foot placed slightly to the right side and the other just in front of the patient and in the middle line. The operator is thus on a firm basis, with the legs well apart and fully extended. He then flexes himself at the hips and asks the patient to lean forwards and to place his forehead in the middle of the sternum of the operator's chest (but this position varies with the size of the patient's head.) The operator now flexes his head so that his chin grips the patient's head about the upper part of the occipital bone; he thus acquires a firm hold and has the head well under control between his chin and chest. The thumbs, protected in the usual manner, are placed in the patient's mouth and the fingers of both hands grasp the lower jaw. In this position reduction is facilitated, and the advantages over the ordinary methods are as follows: (1) The operator has the head under perfect control and perfectly fixed; (2) the line of force exerted by the operator's hands acts in the same line as the resisting force exerted by the operators's chin; (3) the operator's elbows being well flexed, he can exert a greater power by the force acting through the thumbs being close to the shoulders, and it will be found that he has greater power of muscular action in the terminal phalanges of the

same; (4) the patient's head is also in a better position for replacing a dislocated jaw; (5) the operator needs no assistant and does not inconvenience his patient by the excessive pushing and pulling about of the head during the reduction.—*Lancet.*

The conclusions drawn from two cases of chronic lead poisoning are: That lead is slowly and more or less continuously eliminated by the bowels, and, to a very much lesser extent, by the kidneys. That once deposited in the tissues it exists as a stable compound over which drugs have little if any power. That the best aids to elimination are baths and general massage, together with fresh air, good food, and all other measures by means of which the general health may be improved and healthy metabolism promoted. Whilst denying that potassium iodide promotes elimination of lead, the possibility of its being beneficial in some other way in cases of chronic lead poisoning is not disputed.

Biniodide of mercury can be combined with syrup of hydriodic acid; but the protiodide is converted into biniodide by this acid. Among the affections for which hydriodic acid is indicated, Wilcox, (*Med. Age*), enumerates acute rheumatism, acute bronchitis, asthma with chronic bronchitis, bronchorrhea, smallpox, syphilis, chronic lead poisoning, obesity, amyloid liver with fatty heart, exophthalmic goitre, scrofula, and arthritis deformans.

Sir William Roberts suggests the use of lactic acid fermentation as a counter-septic for ammoniacal urine, and for suppurations. He washes out the bladder with a solution of citric acid, ten grains to a pint of warm water, and then injects diluted malt extract.—*Lancet.*

Murray urges the use of arsenic in large doses for chorea, diabetes, and asthma. In diabetes, when diet and codeine have reduced the sugar, the patient is put upon arsenic for three months, while returning to full diet.—*Lancet.*

Somers (*Occidental Med. Times*) treats of the difficulty of diagnosis in head injuries, and mentions five cases occurring at the San Francisco Receiving Hospital, that were mistaken for drunkenness. One proved to be a case of double pneumonia (fatal), one of epilepsy, two of skull fractures, and one of gunshot wound of the head. From these cases he deduces the conclusions that a diagnosis is often impossible, and facilities for medical observation should be promptly available.

Lane describes, in the *Lancet*, a case of acute inflammation of the gall-bladder. Severe and suddenly-occurring abdominal pain, vomiting, anorexia, distended abdomen, and constipation, were the symptoms. After four days, the symptoms continuing, with great prostration, and local evidences of inflammation, the abdomen was opened and the gall bladder emptied, drained, stitched to the peritoneum, and the patient recovered with a biliary fistula

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Laucereaux treats delirum tremens with unvarying success. He puts the patient in a perfectly quiet, dark room, padded if necessary, gives 60 to 90 grains of chloral with half a grain of morphin, in an infusion of limes. If sleep be not produced in ten minutes he injects $\frac{1}{6}$ to $\frac{1}{3}$ grain of morphine, and repeats the chloral if necessary. When all agitation has ceased he gives strychnine; soda for the stomach, and hydrotherapy later on.

Ralfe says that the albuminuria so often found in morphine *habitués* is probably due to venous plethora, the drug causing partial paresis of the renal veins and their branches.

Abscess of the Nasal Septum.—Dr. Edward J. Bermingham, Surgeon to the New York Throat and Nose Infirmary, contributes an article on this subject, with the report of a very interesting case. A boy, eleven years of age, fell on the pavement, striking on his face. No symptoms beyond slight cutaneous abrasions were noticed for ten days, when the nostrils became occluded, and headache and frontal pain became almost unbearable. Four days later, when first seen, a tumor, looking like an inflamed polypus,

presented through each nostril. Incision released a teaspoonful of thick pus and gave immediate relief to all symptoms. After treatment consisted of thorough cleansing several times daily with a mixture of one part of glyco-thymoline to three of water. Recovery followed promptly.—*Medical Age, Feb. 25th.*

NOTES ON NEW REMEDIES.

FROM SQUIBB'S EPHEMERIS.

Ichthyol. Still reported useful locally in erysipelas, eczema, rheumatism, metritis, parametritis, ovaritis. A fatal case occurred from applying a thirty-three per cent. solution to a freshly curetted uterine cavity.

Iodoform is said to be disguised by camphoid, cumarin, terpineol, menthol, or essential oil of coriander.

Iodophenin gives off iodine too readily and is condemned.

Iodopyrin was used successfully in a few typhoid cases, and rapidly reduces hectic, with free sweating.

Iodozone, a spray for wounds or for phthisis.

Ipecacuanha has succeeded in hemoptysis where ergot and gallic acid failed. Nausea is necessary.

Jambul is doubtfully reported as a remedy for diabetes.

Lysol proves a serviceable disinfectant, active, soluble and cheap, but not suitable for wounds, as it is only microbicide in irritant strength.

Methacetin has been found useful in typhoid fever, rheumatism, neuralgia, pneumonia, all pyrexias, but is not equal to phenacetin. In phthisis it produces severe sweats. It is five times as soluble as phenacetin, and is non-toxic.

Methylene Blue colors the urine and causes some strangury, but no albuminuria. A little nutmeg relieves the strangury. It is effective in malaria but not superior to quinine. It exerts no action in tuberculosis, and may be used to diagnosticate it from malaria. A ten per cent. solution was used locally for diphtheria successfully, and in cystitis it has been praised.

Monochlorphenol for tuberculosis, as inhalant. It must be kept cool.

Naphthalin for all kinds of intestinal parasites. One gram removes a tapeworm entire. Castor oil is given after it, to adults, with it, to children. An ounce, burnt in the bed-room on each night, cures pertussis in two or three nights. It is so irritant to phthisis that it may prove diagnostic.

Naphthol is best used in the form of naphthol camphor, formed by heating one part of beta-naphthol with two parts of camphor, until a homeogeneous melted mass forms. Air and light decompose it. It is injected into tuberculous glands, and other local tuberculous nodules, joints, cavities, abscesses, etc. It is used undiluted.

Orexin hydrochlorate has produced appetite, but is contra indicated by gastralgia or gastric hyperesthesia.

Ouabain has succeeded with pertussis; dose, gr. $\frac{1}{1000}$ every third hour, to a child under five years old. As a local anesthetic it is inferior to cocaine. It is a potent emetic, especially if given hypodermically; increases peristalsis and urination.

Paraldehyde has succeeded in tetanus and in maniacal insomnia in mild forms. It is probably diuretic.

Pental, an anesthetic, requiring about 5½ fluidrachms to produce anesthesia for minor work. It is not so deep an anesthesia as that of ethyl bromide, but safer, and has no bad after-effect. Sensation is lost before consciousness.

Phenacetin, has had its best field in influenza. It is safer than antipyrin or acetanilid, and more enduring.

Pheno-Salol, is a mixture of carbolic, 9 parts, salicylic, 1, lactic, 2, and menthol $\frac{1}{10}$. The acids are heated to liquefaction and the menthol added. It is double the antiseptic strength of carbolic acid.

Phenocoll, was found by Cohnheim to cause more chilliness and sweating than antipyrin; to equal other remedies for neuralgia; to be useless in hysteria; serviceable in acute rheumatism but not in chronic, or in bronchial asthma. Albertoni found it effective in malaria.

Phenolid, is composed of equal parts acetanilid and sodium bicarbonate.

Piperazine, sustains its place as a solvent of uric acid, and has been applied locally with success, in 1 per cent. solution to gouty sores.

Pyoktanin furnishes conflicting reports.

Pyridin is used for asthma and angina pectoris.

Pyrodin is alleged to be antipyretic.

Pyrozone, a solution of hydrogen dioxide in ether, for external use as an oxidizer.

Quickine consists of one part pure carbolic acid, $\frac{1}{50}$ part corrosive sublimate, $\frac{1}{1000}$ part of a mixture of alcohol and water.

Resopyrin, resorcin and antipyrin mixed in chemical equivalent proportions in solution, and crystallized.

Resorcin has gained favor in diarrhœa, gastritis, gastric ulcer, gastric cancer, for insomnia of nervous excitement, typhus and phthisis, pruritus, locally for ulcers, and for pertussis.

Retinol, a solvent for salol, etc.

Safrol, a rubefacient in subacute rheumatism and internally, in doses of sixteen to thirty-two minims.

Salicylamide, has less taste than salicylic acid, is more soluble, acts quicker, in smaller doses, and is more analgesic. Dose 3 to 5 grains several times a day.

Salipyrin, is said to be a better remedy for rheumatism and influenza than either of its constituents, but a mixture of the two would probably do as well. Two parts antipyrin to three of salicylic acid.

Salol, has been used with success in dysentery, infantile diarrhea; many report favorably in cholera; chronic cystitis, and gonorrhea. It is used as a pill coating, insoluble in the gastric juice; made of salol 4 parts, tannin 1, and ether 20. This is varnished on in several coats.

Salophen does not decompose into carbolic acid, as does salol. It is very effectual in acute rheumatism, and does not weaken the heart, or produce albuminuria or smoky urine.

Sanitas disinfecting fluid is a good oxidizer, non-poisonous, and does not soil clothing.

Safrol is quite inflammable, sterilizes infected feces in one per cent. solutions, and is sheap.

Sodium tetraborate, a soluble substitute for boric acid.

Solutol, a good household disinfectant, not suited for surgical dressings.

Solveol is a disinfectant, not greasy like creolin and lysol, and useful in surgery, making clear solutions. One-half per cent. is suitable for dressings, and eight per cent for spray.

Somnal fails as a general hypnotic, but is useful in the insomnia of convalescence, pertussis, laryngeal spasm, asthma, chorea, and nervous cough. It is safe and uniform in action.

Sozal is a weak antiseptic, soluble, and keeps well.

Sozoiodol, a substitute for iodoform.

Spermin is still on the doubtful list.

Styracol, externally, as antiseptic; internally, for phthisis, cystitis, gastro-intestinal catarrh, has hardly been tested yet.

Sulphaldehyde, hypnotic, dead.

Sulphaminol, substitute for iodoform, odorless and tasteless, has no value as antiseptic.

Su'phonal has won a place in treating the insane. A very important hypnotic.

Sulphume is an aqueous solution of sodium and potassium sulphides saturated with sulphur ; a nostrum "cure all."

Terebene, an agreeable antiseptic and deodorizer, A five per cent. solution is a good surgical dressing. The vapor is of use in bronchial affections and phthisis.

Thilanin, a sulphuretted lanolin, for skin diseases.

Thiol, artificial ichthyol, used by gynecologists as a substitute for the latter, over which it has some advantages, being painless, odorless and easily washed out of linen.

Thiophene salts relieve prurigo, and the di-iodide is a substitute for iodoform.

Thymacetin, a new analgesic. Dose 7½ grains. It accelerates the pulse and causes fullness of the head.

Trional and *Metronal*, new hypnotics, requiring smaller doses than sulphonal, and acting more quickly. No bad after-effects, except slight digestive disturbance occasionally.

Tuberculocidin, and Hunter's modifications of *tuberculin*, are now on trial.

Tumenol, proves universally useful in pruritus, applied in tincture. Moist eczemas and erosions are benefited.

Urethan, a mild hypnotic, especially useful for children.

THE REST CURE.—Since rest treatment has taken its place in medicine, I, and others, have extended its use. In the treatment of chronic alcoholism rest in bed for a few weeks has obvious values, and, combined with skim-milk diet and massage, is often of use.

In all forms of neuritis, local or general, rest is essential, and in alcoholic neuritis, rest, massage, milk diet, and the use every three to six hours of what I may call cold and heat alternates, will often triumph rapidly. This use of cold and heat is effected by putting the feet and hands in iced or very cold water a few minutes, and then applying in turn to each extremity the greatest heat endurable by mopping with soft towels dipped in nearly boiling water. The limb is then replaced in the cold water, and after three or more alternate uses of heat and cold, is taken out, warmed well and left dry.

Obstinate cases of chorea are best treated by rest, absence of friends and of all excitement, massage, and, of course arsenic or what not.

Again, I treat all grave cases of morphia habit by absolute rest in bed. This alone has easily seen advantages. If the case be a very bad one, before I take away the drug I like to use for a time massage, very large doses of bromides, and to train the stomach which is our worst foe, to endure a diet of peptonized food, preferably milk. The susequent chance of escape with moderate suffering is thus largely increased, and when we are free from the more immediate consequences of laying aside the opiate, we easily return to normal diet. The common-sense of all this must, I think, be clear to you, and some of what I have said is novel as well as useful.—Wier Mitchell, in *Dietetic Gazette*.

News.

Antipyrin blackens the teeth.

Bromism causes exaggeration of the knee-jerk.

Chicago is fearfully overstocked with doctors.

Forty-three places in England are named by the *Lancet* of February 25, as being affected with smallpox.

In 1892, England spent $700,000,000 for alcoholic drinks, and $400,000,000 on railroad traveling. The whole coal and metal output of the country falls short of the spirit bill by $225,000,000.

Koumyss is one of the best of all remedies for vomiting.

A hospital with forty beds is being prepared for the use of the laborers on the canal now being constructed to drain the Chicago river. A good deal of sickness exists among these men.

Dwight puts the incubation period of diphtheria at forty-eight hours.—*Med. Age.*

The frightful waste of nature's reproduction methods may be seen by Lobe's statement, that 225,000,000 spermatozoa are in one ejaculation; although but one is needed to fertilize an ovule.

The Idaho Legislature is wrestling with a bill providing a State Board of Health and Medical Examiners.

Dixon says (*Ala. M. & S. Age*) that the offspring of mulattoes rarely reach the fourth generation by reason of disease and sterility.

INFECTION BY CIRCUMCISION.—Dr. F. P. Kinnicutt reports the cases of ten Jewish boys, who were circumcised by a man who died afterward of consumption. The preputial wounds were infected by the operator's saliva, showing symptoms ten days later. Seven of these poor victims died, and three survived with tuberculous adenitis.

The fees in the Medical Department of the University of Texas at Galveston have been abolished entirely by the Board of Regents, and a matriculation fee of $30 is now the only charge for students entering that institution, except, perhaps, a diploma fee upon graduating. This is a very sensible move, especially in light of the competition, other colleges charg-

ing less than the fee at first established, and as the professors are not dependent for their salary upon such revenue.—*Texas Sanitarian.*

The-bell boy at Prof. W. S. Forbes' residence has been indicted for setting fire to the house four times in one day last week. But little damage was done, except to the nerves of the residents.

George Winters has confessed to shooting Dr E. L. Klopp, at Oak Lane, Pa., on January 27.

Dr. Livingstone, of Bennettsville, N. Y., is said to have regained hearing and speech after 60 years' deprivation.

Dr. W. B. Shaner and others are forming an Angler's Association in Pottsville, Pa.

Eleven thousand citizens of Philadelphia have petitioned the Legislature not to pass the Markley milk bill.

The Boyer bill regulating the organization of beneficial fraternities passed the Pennsylvania House without a dissenting vote. This will be good news to all honestly conducted orders.

Dr. W. K. Mattern represents the Thirty-seventh Ward in the Board of Education.

A Louisville drug clerk ordered fluid extract of antimony, with which to make antimonial wine.

Dr. Southgate, a homœopathist of Clarksburg, Tenn., was found dead with several bullets in, him near the house of a married woman with whom he was said to have been intimate.

Nearly the whole faculty of Jefferson Medical College is in Harrisburg, seeking to obtain an appropriation of $110,000 from the Legislature for the hospital. The ground purchased for the new location at Broad and Catharine streets, lies empty and desolate; having been cleared of its contents and nothing since done, not even being fenced.

John S. Billings says Baltimore needs accurate mortality statistics, sewers for slop-water, and control of the sources from which the water-supply is derived.

A young man treated at an English institution on the Wier Mitchell plan, for "incipient neurasthenia" says that he gained ten pounds at a cost of $4.87½ per ounce.

Pea-nut flour has ceen introduced in Germany as a food, containing nearly 50 per cent of albumen. Nordlinger pronounces it the most nutritious and cheapest food in existence.

Lange asserts that pruritus from uricemia is quickly cured by alkalies internally.

Uterine Carcinoma.—Pomoriski reports success with Schultze's alcoholic treatment in this direful disease. After twenty-one injections for carcinoma of the uterus the ineffable pain was relieved, the discharge checked, the bleeding ceased, and the filthy smell disppeared. He considers it an undisputed palliative measure and one that should not be neglected to relieve pain.

A London surgeon, completing a laparotomy, gave his needle a flourish that took out the lens from the eye of an unfortunate assistant.

The Paris University students have objected to female students so vigorously that separate classes have been provided for the latter.

Dr. S. J. Liggett has entered suit against C. H. Griffes, secretary of a cooperative real estate association. Dr. Liggett says he paid Griffes $500 to pay off a mortgage, and the latter only paid $100; retaining the balance.

Dr. E. P. Davis lectured at the College of Pharmacy, on March 14, on "Food and Clothing of Young Children."

The Board of Health has requested the Board of Education to forbid pupils being sent to inquire after absent children, as the latter may have contagious illness.

The Board of Education has received four petitions from women's organizations asking that the High and Normal School courses be modified so as to prepare girls for college.

An Indiana man bet he could drink a glass of vinegar. He won the bet, but has been unconscious for several days since.

Councils' committee on Highways recommends that the little streets in the "slum" district be paved with asphalt.

The Philadelphia Board of Health asks for $100,000, to guard against cholera; one-half to be reserved until the disease has appeared. No better investment of the city's money could be made; even in a commercial view.

Small-pox is spreading at Reading, Pa., and has appeared at Elizabeth, N. J.

Cholera germs in contact with the rind of oranges or lemons die in twenty-four hours; in contact with the cut surface they die in a few hours.

Pessimism is now definitely pronounced to be a neurosis. We confess that we never meet a pessimist without feeling an urgent desire to prescribe for him a dose of aloes.

The Illinois Legislature is devoting its alleged intellect to the consideration of a bill compelling doctors to write their prescriptions in English. Many persons fail to comprehend that a prescription may be read in any country or by any druggist in Latin, while in English it can only be read by those who read that language.

Smith pronounces atropine the best remedy known for paralysis agitans.—*Daniel's Tex. Med. Jour.*

Cohen reaffirms his belief in the value of quinine bimuriate carbamide, hypodermically administered, for malarial fevers. Fifteen grains at one dose will do the work of twenty-five to thirty grains daily for a week.—*Phila. Polyclinic.*

Bloom has given atropine in thirty cases of uterine hemorrhage, and in not one did the drug fail. He gave gr. $\frac{1}{100}$, every three or four hours.—*Phlia. Polyclinic.*

Forty thousand patients visit Carlsbad annually in search of health and almost always return benefited. And yet the waters are no better than are found at some of the famous springs in this country where no such benefits are obtained. The simple reason is that Carlsbad is a health resort, and every mouthful of food and every hour's work is carefully prescribed. The water, the exercise and the food are all taken in the form of a prescription after a careful medical examination. A failure to carry out the instructions of the physiciens to the let- and the patient is informed his presence is no longer desired. Similar care at our own watering places would be followed by like beneficial results.—*N. Y. Med. Times.*

PAN-AMERICAN MEDICAL CONGRESS (Section on Hygiene, Climatology and Demography).—Persons proposing to present papers before this Section are requested to communicate with either of the undersigned *immediately*, that titles of subjects may be properly classified for the programme of the proceedings of the Congress. The only limitation as to subject matter is that it shall have a sanitary, climatological, or statistical bearing. Members of the Section on State Medicine of the American Medical Association, the American Public Health Association, the American Climatological Association, the American Academy of Medicine and of State and Municipal Boards of Health are especially invited to contribute the results of their several experiences. The languages of the Congress being Spanish, Portugese, French and English, papers may be presented in either to be translated in the others, for which reason their text should be in the hands of the secretaries at the earliest possible date. Albert L. Gihon, M. D., president, 145 East 21st Street, New York City; Pedro Josè Salicrup, M. D., secretary, (Spanish), 129 East 17th Street, New York City; Peter H. Bryce, M. D., secretary, (English), Toronta, Canada.

Dr. Robert Newman has been appointed Consulting Surgeon to the West Side German Dispensary, N. Y. City.

WHAT I KNOW ABOUT A PRESCRIPTION FILLED BY MYSELF:—

1. I know what it contains.

2. I know how much of any and all drugs it contains.

3. I know that it contains what is called for.

4. I know that it is compounded carefully and properly. Who will do my work more carefully than I, myself? Who is so much interested in my success, as I, myself?

5. I know that it is filled and delivered at the right time.

6. I know that when it is all gone the patient will call on *me*, and have it refilled if he needs more, when I can give further directions, or change it if I see fit.

7. By filling my own prescriptions I deal the patent medicine fraud a powerful blow.—*Bismark Liesman, in Med. Summary.*

IS TUBERCULOSIS A MIXED DISEASE.—Ortner, after many experiments and examinations of different cases of tuberculosis, concludes that it is a compound disease. In a large number of cases the initial stage is ushered in by pneumonia (fibrinous), around this product a morbid inflammation is deposited, implicating alveola and becoming cheesy. In the examination, micrococci are found associated with the bacilli. Hence he reasons that the two microbes are necessary for the production, as they can be found later associated in the disease. In the cheesy matter the specific bacilli are to be found, while the inflammation is produced by the micrococci. The fever is not produced by the bacilli, pus-cocci or pneumococci.

TUBERCULOSIS IN CATTLE.—The Public Control Committee of the London County Council has asked the President of the Board of Agriculture to issue an order declaring tuberculosis a contagious disease within the meaning of the Contagious Diseases (Animals) Act. The action of the Committee is interesting as showing the interest taken in the subject by an important public body. Mr. Gardner is, however, unable to accede to the wishes of the Committee until the report of the Royal Commission on Tuberculosis has been issued, when it may be anticipated that there will be ample material to guide the Government on the course which should be pursued. The report recently issued by the Board of Agriculture shows that this disease is very prevalent in English stock, and if it be decided to adopt the practice of slaughtering all animals suffering from this malady the question whether the meat may, under certain circumstances, be used for human food or must always be wholly destroyed becomes a matter of much importance. This, it is understood, is under the consideration of the Commission, and the report will therefore be looked for with much interest.—*British Med. Jour.*

CHOLERA PRECAUTIONS.—The Lord Mayor presided on February 17th, in the Council Chamber of the Guildhall, over a Conference of Port Sanitary Authorities, held for the purpose of considering the best means of preventing the introduction of cholera into this country. There was a numerous attendance.

In opening the proceedings, the Lord Mayor remarked that they were all aware of the ravages cholera had made during the last year in neighboring countries, and it was the duty of Englishmen, therefore, to keep their ports and their country clean, and to take such precautions as would stave off as far as possible this dreadful scourge.

A number of resolutions were then submitted to the Conference and discussed, and it was eventually resolved:

(1) That, inasmuch as special cholera precautions carried out by the port sanitary authorities are for the benefit of the whole population, those precautions, as far as they are special, should be carried out at the Imperial expense

(2) That the medical inspection of all ships arriving at British ports from any port infected with cholera should be kept up by night as well as day, as far as practicable, and that every British port should be provided with staff and appliances sufficient for this purpose.

(3) That it is desirable in all cases that power of detention should be

obtained of all vessels coming from infected ports.

(4)That information as to infected ports should be forthwith issued by the Local Government Board to the various port sanitary authorities.

(5) That the detention of the medical officer of health on board a vessel until she had received a quarantine certificate was objectionable and should be abrogated.

(6) That statutory power should be obtained to penalise false answers given by the masters of vessels to questions put by the authorities as to the health of the crew, and that the penalty should be increased.

(7) That power should be obtained to require all vessels (including fishing vessels) having been in communication with infected or suspected ports to hoist a distinguishing signal on arrival.

(8) That the quarantine or detention of vessels having no sickness on board, and so certified by the port medical officer, is unjustifiable.

(9) That there should be an alteration of the cholera regulations enabling addresses of destination of the passengers and crews of vessels to be sent direct to medical officers of health.

(10) That the crews of all vessels, whilst in infected or suspected ports, should be prevented from going ashore.

(11) That the discharge of fresh water ballast or fresh water sand (whether as ballast or cargo) from an infected port into any British port should be prohibited.

The draft report of the committee appointed on December 17th, 1892, was also submitted to the meeting and adopted. The report, among other matters, recommended cremation as the best mode of disposing of infected corpses, and the desirability of each port sanitary authority providing a port hospital for cholera. The proceedings closed with a vote of thanks to the Lord Mayor.—*British Med. Jour.*

At the Royal Meteorological Society, January 18, 1892, the President, Dr. C. T. Williams, read a paper upon Colorado and its Climate and concluded by summing up the chief elements of the climate of Colorado as follows:

1. Diminished barometric pressure, owing to altitude, which, throughout the greater part of the State, does not fall below 5000 feet.

2 Great atmospheric dryness, especially in winter and autumn, as shown by the small rainfall and low percentage of relative humidity.

3. Clearness of atmosphere and absence of fog or cloud.

4. Abundant sunshine all the year round, but especially in winter and autumn.

5. Marked diathermancy of atmosphere, producing an increase in the difference of sun and shade temperatures, varying with the elevation in the proportion of 1° for every rise of 235 feet.

6. Considerable air movement, even in the middle of summer, which promotes evaporation and tempers the solar heat.

7. The presence of a large amount of atmospheric electricity.

Thus the climate of this State is dry and sunny, with bracing and energizing qualities, permitting outdoor exercise all the year round, the favorable results of which may be seen in the large number of former consumptives whom it has rescued from a life of invalidism and converted into healthy, active workers; and its stimulating and exhilarating influence may also be traced in the wonderful enterprise and unceasing labor, which the Colorado people have shown in developing the riches, agricultural and mineral, of their country. Dr. Williams concluded that here, as in other cases, we may render homage to the "Empire of Climate."—*Occidental Med. Times.*

The Friends' Select School Sixteenth and Cherry Sts., Phila., has been temporarily closed on account of the death of a pupil from scarlatina. It is thought that the disease was contracted in the child's home, Haddonfield, N. J., but with true Quaker caution the committee preferred to run no risk, but to close the school until it was certain that no other cases were developing among the pupils.

Dr. Henry W. Stelwagon holds a Jefferson Medical College "smoker," in the Therapeutic Laboratory of the College Building, on Saturday evening, March 18th, at 8.30 o'clock.

The Times and Register.

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DIPHTHERIA.

BY E. FLETCHER INGALLS, A. M., M. D.

[Professor of Laryngology and Practice of Medicine, Rush Medical College; Professor of Diseases of the Chest and Throat, North-western University Women's Medical School, and Professor of Laryngology and Rhinology, Chicago Polyclinic.]

DIPHTHERIA may be defined as a specific contagious disease, characterized by pronounced constitutional symptoms and inflammation of the mucous membrane of the fauces and upper air passages, with exudation of inflammatory lymph, which rapidly becomes formed into false membrane.

It has long been recognized as one of the zymotic fevers. Many English authors, with whom I am fully in accord, consider it a constitutional disease with local manifestations, but among continental physicians and American writers there are many who regard it as a primary local affection with secondary constitutional symptoms. I can see no more reason for regarding this as a local disease than for regarding vaccinia in the same light. To me the peculiar false membrane formed in the fauces appears analogous to the peculiar vesicle developed after inoculation with vaccine virus, and the fact that there is a distinct period of incubation extending sometimes over many days before there is any development in the fauces, together with the fact that in some instances the disease runs to a fatal termination within a few hours and before there has been any appreciable local manifestation, seems to prove this position.

ETIOLOGY.—The disease is undoubtedly contagious, but the degree of contagiousness varies much in different epidemics. The affection is generally believed to be due to a specific micro-organism, the identity of which is not as yet fully established. Various bacteria have been found in the mouth of those suffering from diphtheria, most of which, however, may also be found in the buccal secretions from healthy individuals. Most bacteriologists now atribute it to the Klebs-Loeffler bacillus. This bacterium is a microscopic rod about the length of the tubercular bacillus, but twice its thickness. It is usually more or less bent, with rounded extremities, one or both of which may be thickened, giving the club or dumb-bell appearance. It is immobile and contains no spores. It does not readily absorb the common aniline stains, but may be colored by the solution of Loeffler's methylene blue, the coloration often being most intense at the extremities. These bacilli are said to be found most abundantly in the superficial portions of the false membrane, and nearly all experiments go to prove that they do not often enter the lymphatics or blood vessels; therefore, of itself, the bacillus is apparently innocuous, but it secretes a virulent toxalbumin or ptomaine easily absorbed, which produces the constitutional symptoms of the disease. Numerous experiments have demonstrated that pseudo-membranous inflammation is often produced independ-

ently of this bacillus, as, for example, that resulting from surgical injuries to the throat, or various chemical caustics; and they have also shown that certain exudative inflammations supposed to be of microbic origin, as, for example, those frequently observed in scarlet fever and measles, are not attended by the development of the Klebs-Loeffler bacillus. These latter inflammations have been termed pseudo-diphtheria, and it is stated that they can only be distinguished from true diphtheria by the absence of the Klebs-Loeffler bacillus, by not being followed by paralysis, and by not being attended by a peculiar form of albuminuria, which occurs in true diphtheria independently of dropsy or uremic poisoning. The necessity for assuming that there are two varieties of diphtheria, seems to me to justify the statement made in the beginning, that the identity of the micro-organism which is supposed to cause the disease is as yet uncertain.

The most frequently predisposing cause of diphtheria is exposure to cold, more particularly in the spring and fall months, when the temperature of houses is liable to be kept at from 65° to 68° F.

At this time adults moving about the house do not realize the necessity for fire, but the little children upon the floor are exposed to a temperature from four to eight degrees lower; or morning and evening children are allowed to run about in their night clothing and thus contract colds, which favor the development of diphtheria.

The symptoms of this disease are so well known that I will call attention only to the peculiarity of the temperature, which is often overlooked, and to the albumen in the urine. The temperature at first seldom rises above 101° or 102° F., and on the appearance of false membrane it usually falls and may even become subnormal. During the third or fourth day of the attack it is likely to rise again to 102° or 103° F., indicating in favorable cases suppuration and exfoliation of the false membrane; or in those which are progressing unfavorably, extension of the disease to the larynx, the lower air passages, or to the intestinal canal. A sudden fall of temperature after four or five days is a sympton of grave import. Albuminuria is present in nearly all cases very early in the disease.

Diagnosis — Diphtheria is not likely to be mistaken by the experienced physician for any disease except follicular tonsillitis and simple membranous sore throat; though in some cases, it may be a difficult matter to distinguish between diphtheria and the pseudo-membranous forms of scarlatina or measles. The essential points of difference between diphtheria and follicular tonsillitis are: In follicular tonsillitis there is higher temperature, commonly two or three degrees more than that of diphtheria; there is much more pain in the throat, and difficulty of opening the mouth, which is not usually present in diphtheria; the swelling of the tonsils is greater, and there appears a number of small yellow spots where secretions have collected in the follicles instead of one or two uniform patches of false membrane spreading over a considerable part of the throat.

In simple membranous sore throat, at first there are numerous herpetic vesicles, but after two or three days these are covered with a membrane similar to that of diphtheria, though it is not so thick and more easily removed. Commonly also, there are several patches of this false membrane, and herpes labialis is apt to occur at the same time. The pain in simple membranous, or, as it is sometimes known, herpetic sore throat, is usually very much more intense than in diphtheria.

There is usually no difficulty in distinguishing between diphtheria and scarlatina or measles, but sometimes in either of these affections the deposit of false membrane in the fauces may cause an appearance very like that of diphtheria. There is a question whether in such cases there are the two diseases combined, or whether the pseudo-membrane, as claimed by bacteriologists, is entirely different in its origin from true diphtheritic membrane. The distinctive features between diphtheria and the cases of scarlatina in which the throat symptoms closely simulate it are: The higher and more persistent fever in scarlatina, the greater pain; more intense congestion, and its wider diffusion; the redness of the tongue and usually a thinner and less extensive false membrane, and finally the typical rash.

PROGNOSIS.—The prognosis of diphtheria is always grave and we can never assure the friends that the patient is out of danger until he has been well for three or four weeks. I have known cases to terminate fatally within twelve hours after the beginning of the attack, but in the majority of fatal cases death does not occur before the fourth or fifth day, and in a considerable number life may continue five or six weeks. In some epidemics of the disease a larger percentage of patients recover; but in others twenty-five or thirty, or even a larger per cent., prove fatal. The deposit of false membrane in the nose, or naso-pharynx, or intestines; the occurrence of extreme pain in the ears and throat, of purpuric spots on the skin, or of epistaxis or other hemorrhages, and the presence of persistent anorexia, vomiting, diarrhœa or suppression of urine, are all grave indications. Death usually results from asthenia, suffocation, heart failure or convulsions. Not infrequently paralytic symptoms supervene three or four weeks after the beginning of the attack, but except in cases where the respiratory or circulatory centers are involved, this is usually recovered from, though it may not be for weeks or even months. Sometimes more or less loss of muscular mobility remains permanently.

TREAMENT.—There are few diseases in which more numerous methods of treatment have been highly recommended, a fact which may be explained by the inutility of the majority of the means adopted. So much depends upon the condition of the patient when attacked, upon his hygienic surroundings and the variety and nature of the particular epidemic, that physicians are necessarily led astray in estimating the effect of remedies employed. During the first part of a severe epidemic a large percentage of patients may die, whatever methods are used in the treatment; but later on the cases become less and less severe and the fatality greatly diminishes, regardless of the treatment employed. However, the remedies which are in use during the latter part of the epidemics are liable to receive all the credit.

Whenever diphtheria appears in a household, the patient should be isolated at once, and all other children should be removed if practicable, and those in attendance upon the patient should not come in contact with other members of the family. When a good room can be had in the upper story, if these precautions are observed, there is very slight danger of the contagion extending. The rooms occupied by the patient should be kept carefully closed and the doors covered with sheets constantly moistened by antiseptics. The sick room should be kept warm and thoroughly ventilated; and finally when the attack subsides, the utensils and clothing used in the sick room should be disinfected or destroyed, and the room thoroughly fumigated and aired before it is used again; even then children ought not to occupy the room for several weeks afterwards.

In the beginning of the attack, ice taken into the mouth often tends to relieve thirst, reduce congestion, and apparently to limit the progress of the disease. More effective has seemed to me the application externally of ice bags or the coil of metallic or rubber tubing through which a current of ice-water is constantly pouring. A proper ice bag should be three or four inches wide and twelve to sixteen inches long. It should be half filled with pieces of ice about the size of filberts. The bag should be folded in a handkerchief, or other thin cloth, and tied under the chin so that it will extend up to the ears on both sides. The ice will need to be renewed about every hour. Usually this is grateful to the sufferer, but occasionally patients complain of pain when cold is employed and, in these, very hot applications will be found to answer a better purpose, but whether heat or cold be used, it must be continuous; otherwise more harm than good will result.

As soon as the membrane begins to separate, which is apt to take place on the third or fourth day, hot applications appear to be more useful than cold. Liquid diet in the form of beef tea, broth, or better yet, milk, should be given at regular intervals and in large quantities. Half a pint of milk or its equivalent should be given, if the stomach will bear it, as often as every third hour for a child ten years of age. Alcoholic stimulants are recommended early by many practitioners, but to me they seem un-

necessary and undesirable until the pulse shows some depression. On the principle that bacteria cannot live in acid solutions, the free use of acidulated drinks or gargles is recommended, and this possibly explains the reputation attained among the laity by pine-apple juice as a cure for diphtheria. Many substances have been used with the hope of removing the false membrane; the simplest of these is steam, which may be impregnated with the time-honored lime-water and applied by the croup tent or any suitable atomizer, but it is extremely doubtful whether lime in any form is ever applied in sufficient quantity to appreciably affect the pseudo-membrane.

Lactic acid is one of the most powerful solvents for pseudo-membrane. It has been highly recommended in about fifteen per cent. solution, to be frequently employed as a gargle or spray, and in full strength, to be carefully applied by the physician twice daily to the false membrane.

Trypsin, resorcin and papain have all been used for their solvent effects upon the membrane, but they seem to have little if any influence upon the progress of the disease. Tannic acid and alum are used to astringe to the false membrane and insufflations of sulphur have become extremely popular with the laity-but none of these seem to have much effect upon the disease.

Solutions of mercury bichloride, one to one thousand or weaker; of carbolic acid, one to three per cent.; of potassium permanganate, one per cent.; liquor sodæ chlorinatæ, five per cent.; of chloral, about thirty per cent.; or of sulphurous acid, from five to ten per cent., and iodide of sulphur ʒij to glycerine ʒi, have all been highly recommended, from time to time, as gargles, sprays or pigments to destroy the poisonous germs in the throat. Peroxide of hydrogen is also used for the same purpose, either diluted with an equal part of water, or in full strength as obtained from the pharmacist. Tincture of myrrh, strong alcohol, and tincture of the chloride of iron have also been extolled, and occasionally tincture of iodine or a strong solution of nitrate of silver has been used. While any of these may, if properly used, prove efficacious, I believe that strong applications often do more harm than good, and any remedy which causes the patient pain for more than five minutes is likely to be injurious.

Recently I have adopted as a local application, either by means of spray or gargle, a saturated solution of boric acid in cinnamon water, to which I sometimes add one per cent. of carbolic acid. The researches of Roux and Yersin, in 1889, demonstrated that the toxicity of cultures of the diphtheritic bacillus is greatly diminished by the addition of carbolic acid, borax or boric acid, and the experiments of Dr. G. V. Black, of Jacksonville, Ill., reported in the *Dental Review*, for February and March, 1889, have shown that the oil of cinnamon, one to 2000 is a most efficient germicide; therefore, a combination of these appears especially suited to the destruction of the diphtheritic bacillus. This application is neither unpleasant, painful, nor dangerous, and from my clinical observation it appears very effective. Internally no remedy has seemed to me so effectual in combating this disease as the long used tincture of iron, in large doses (about one minim for each year of the child's age) combined with an equal quantity of glycerine and enough syrup of tolu to make one drachm. This dose is administered every hour in serious cases, or once in two hours where the symptoms are less severe. The patient is first given three or four swallows of water, so that the medicine will not prove irritating to the stomach, then the iron is administered in as concentrated a form as can be taken without causing pain; the patient is directed to hold it in the throat as long as possible, thus obtaining the effect of a gargle, and then it is swallowed. Usually as much as ten minims to the drachm will not cause pain in the early stages of the disease, but later on it may be necessary to dilute the dose with water. The gargle or spray should also be used every hour when it can be done without a contest. Thus, one or the other would be administered every half hour except during the night, when it is often necessary to allow the patient to sleep. When the disease is progressing it is sometimes unsafe to allow the patient to go more than half an hour without receiving either the gargle or the solution of

iron; but I would strongly deprecate wakening the patient more often than is necessary for this purpose, and as soon as the membrane ceases to spread, I would allow the child to sleep one or two hours rather than disturb it to give the medicine. Quinine in moderately large doses may be given judiciously. As the stage of depression comes on, alcoholics should be used freely, in the form of wine, whisky, brandy, or diluted alcohol, whichever is pleasantest to the patient. Children will often take readily equal parts of alcohol and syrup of tolu, which is practically of the same strength as good whisky, and may be diluted as seems best. When the heart fails, no remedy is of so much value as some of the preparations of nux vomica. The tincture, although liable to variation in strength, has seemed to me to act more favorably than strychnine. Whichever preparation is adopted, it must be given in large and frequently repeated doses; to a child, about half a minim of tincture of nux vomica for each year of its age may be given every one, two, or three hours, according to the extent of the depression, until the constitutional effects as indicated by twitching of the tendons, are developed; the doses should then be slightly diminished, or the intervals between them prolonged. Within the past few years the bichloride, and other preparations of mercury, have been largely used in the treatment of diphtheria in doses often much larger than could safely be administered to adults. I have myself used freely the mild chloride of mercury with most happy results, especially in diphtheritic laryngitis, but I do not favor large doses of the other preparations, believing that a system already struggling against the virulent poison of diphtheria, is poorly fitted to withstand poisonous doses of bichloride of mercury and its congeners. I have found calomel most efficacious in diphtheritic laryngitis, and have never known it to do harm even when given in very large doses.

Among other remedies which have received the sanction of good authority for this disease are cubebs, copaiba, potassium chlorate, the sulpho-carbolates and sulphites of sodium and potassium, and she salicylates and the benzoates of potassium, sodium and ammonium. Indeed, there are few remedies of any potency in any disease which have not been tried for this affection and which have not, for a time at least, received much unmerited praise.

When the disease extends to the larynx, non-depressing emetics are sometimes useful to dislodge the false membrane and the mild chloride of mercury in large and frequently repeated doses has appeared beneficial in preventing its deposit. I give calomel in such cases in doses equivalent to half a grain for each year of the child's age, every one or two hours, according to the severity of the case, until its effects upon the bowels are noticeable. It is surprising how much of the remedy may be taken under such circumstances before its characteristic effect upon the stools occur. I have seen a child two or three years of age take thirty or forty grains before the bowels moved. As soon as the effects of the remedy are noticed upon the stools, the dose should be diminished in size and frequency, and when the dyspnœa is relieved, it may be discontinued. Unfortunately, whatever remedies are employed, the false membrane will frequently extend to the glottis, as indicated by difficulty of breathing, blueness of the lips and finger nails, and recession of the soft portions of the chest wall during inspiration; when these symptoms occur, no time should be lost in adopting operative measures, even though a limited number of cases could be cured by mercurials and a small percentage might recover by the unaided efforts of nature.

It is not safe to wait for nature, or the slow effect of medicine in this condition, for statistics have shown that about ninety-five per cent. will die if the larynx becomes involved, unless operative measures are adopted, and even then thirty or thirty-five per cent. can be saved; but many cases that would have soon proved fatal will be saved by early operations than if relief is delayed until pulmonary œdema has occurred in consequence of the laryngeal obstruction. One of two operations may be adopted, that to be preferred depending somewhat upon the age of the child and its surroundings. Other things being equal, in a child under five years of age, I decidedly prefer intubation by O'Dwyer's method, though

in older children it is not quite as satisfactory as tracheotomy. Even in quite large children intubation has been found useful, particularly when the graver operation will not be permitted. I would therefore recommend that it be tried first in all cases, because of the ease and rapidity with which it can be performed, the avoidance of a wound liable to a secondary infection and the ready consent of parents, and finally, because it is no bar to the subsequent performance of tracheotomy, should this severe operation appear necessary. Almost any physician can successfully introduce the O'Dwyer tubes, and the confidence gained by two or three intubations will cause him to reccommend the operation earlier, and thus protracted dyspnœa and the consequent pulmonary congestion and œdema will be prevented and many lives will be saved that would be lost if the operation were delayed until suffocation became imminent.

There is only one accident which is likely to occur in the performance of intubation, namely, the crowding downward of loose membrane before the tube. In a few instances this has caused speedy death, but usually when this accident occurs all that is necessary is to at once withdraw the tube, when the loosened membrane will be drawn out with it or will be coughed out immediately afterwards. After intubation the child should be fed with its head considerably lower than the body to prevent fluid from running into the trachea.

36 WASHINGTON ST., CHICAGO.

THE CAUSE AND PREVENTION OF DIPHTHERIA.*

BY DANIEL STROCK, M.D.

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THE cause of diphtheria is a problem, the solution of which has engaged the attention of scientific men in all parts of the world, and while it cannot now be asserted that our knowledge of the subject is complete, yet enough has been ascertained to enable us to formulate certain rational plans of treatment, and to guide us in our efforts to prevent the dissemination of this dread disease.

The demonstration, by Pasteur, that morbid processes in the animal body were due to the presence of micro-organisms, pointed out the line of investigation that would possibly reveal the cause of diphtheria. And therefore, as a result of patient effort, Klebs in 1883, and Loeffler in 1884, isolated a bacillus that now is recognized as the agent concerned in the production of the train of symptoms and phenomena known as true diphtheria.

While it is agreed that the Klebs-Loeffler bacillus is the cause of diphtheria, yet we must not fail to note that fatal pseudo-membraneous inflammations of the tonsils, pharynx and larynx occur in which the Klebs-Loeffler bacillus is absent, and instead is found a streptococcus, which appears to be identical with the streptococcus pyogenes. Although this variety of pseudo-membranous inflammation may be uncomplicated, yet it is frequently found associated with scarlet fever or measles.

Recently, Professor Prudden and Dr. W. H. Park, of New York, have published the results of their investigations of the agents concerned in the production of true and false diphtheria. Prudden made bacteriological examinations in twenty-four fatal cases of pseudo-membranous inflammations of the tonsils, pharynx and larynx, and in all of them the Klebs-Loeffler bacillus was absent; in all but two cases streptococci were found. Park has reported 159 cases of pseudo-membranous inflammations, and of this number in fifty-four only were the Klebs-Loeffler bacillus found. In the other 105 cases streptococci were present in abundance. Martin, of Paris, in examination of two hundred children supposed to have diphtheria, found the Klebs-Loeffler bacillus absent in seventy-two; and of this class twenty-nine were croup cases. Various investigators, as Boginsky, Kolisko, Sevestre, Wurz, Bourges, and others have found streptcocci without the Klebs-Loeffler bacillus in pseudo-membranous inflammations occurring in scarlet fever.

From this we learn that not every case presenting the gross appearances of diph-

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theria is really true diphtheria in the sense that the causative agent is the Klebs-Loeffler bacillus. But in view of the fact that the other varieties of pseudo-membranous inflammations, due to the presence of streptococci, are infectious and fatal, even when unassociated with scarlet fever, the lesson to the doctor is that his duty to the patient and the family is just as grave as it would be if the bacillus of Klebs-Loeffler were present. Clinically, no distinction should be made so far as precautionary measures are concerned; scientifically, efforts should always be made to differentiate, and this can only be done with the microscope and culture media.

Granted that the important part assigned to the Klebs-Loeffler bacillus in the etiology of true diphtheria is warranted by the results of the latest investigations, and there are but few who do not admit this, we are not thereby informed as to the laws governing its propagation and growth. Many of us know from observation that the life of the bacillus may be prolonged for many months and finally demonstrate its activity by causing the disease to develope in those brought in contact with the infected locality. Instances have been given where the contagion of diphtheria has been conveyed in clothing, in sewers, in water, and in milk; agar-tube cultures after seven months growth are still alive; bits of membrane no larger than a pin point, kept in cloth, give evidence of activity after six months. These facts indicate that the germ of diphtheria is tenacious of life, and perpetuates its species under varying conditions of soil and environment; yet they do not inform us as to the circumstances dominating its development.

If we believe that the cause of diphtheria is a definite variety of living germ, with characteristics and a life history unlike any other living entity, then we must assume that there are certain positive conditions necessary for its growth and continued existence, as is the case with all other living things in nature.

To claim that its presence in a given locality is accidental, or that, because of unsanitary environment, by a process of rapid evolution a harmless germ was transformed into one with pathogenic attributes; or, that by a special creative act it is caused to be where it did not exist before, are untenable theories.

No culture experiments have ever resulted in the development of a new type of disease germ; and we have no basis for the idea that nature is engaged in the special work of rapidly creating or evolving these minute agents of destruction, contrary to her methodical processes as observed in the higher orders of animal or vegetable life.

We are constrained to believe that there are certain laws governing the origin and perpetuation of the bacillus diphtheria, but what they are cannot now be definitely formulated. But we *do* know that filthy or unsanitary conditions are co-existent with outbreaks of diphtheria, and there can be no doubt but that moisture, ordinary temperature, and absence of sunlight and pure air are important factors in developing endemics and epidemics of this disease. Further than this, we enter into the domain of doubt and conjecture.

Some observers have thought they traced outbreaks of diphtheria to the spreading of human or animal manure upon land in the vicinity of human habitations. Others attribute its prevalence in cities to the frequent tearing up of the streets, for paving, or trenching for various purposes. Some consider the prevalence of continued dry weather an important factor in developing the disease. Still others, think it is due to drouth alternating with excessive rain. It is supposed that variations of barometric pressure of the atmosphere, over foul and moist soils, causing "ground respiration" and possible liberation of pathogenic germs, may be one of the causes. But it is probable that the theories mentioned above represent coincidental conditions only; and they certainly do not enable us to determine why there should be a rapid proliferation of the germs at one time, under what seems to be conditions identical with those that obtain at another time, when diphtheria does not prevail.

Diphtheria is known to be contagious and infectious, and its prevalence in communities, after the appearance of one or two cases, is largely due to this fact. It is a matter of daily observation that if a

member of a family takes the disease other cases occur in the household. Children sent from an infected house, as a precautionary measure, may convey the affection to those who have not previously been exposed to contagion. The disease may be spread by the dried membrane or expectoration upon pillow-cases, sheets and articles of clothing. Investigation will demonstrate that a large proportion of those having the disease have been in contact with infected individuals or localities; and localities may be centres of infection for a year or more, if not radically disinfected. As bearing upon this point, I have knowledge of a house that was vacated the day following the funeral of a child dead of diphtheria, and it remained unoccupied for one year. It was then taken by a family consisting of parents and one child. In three weeks thereafter the child died of diphtheria. In the absence of any history of exposure to contagion elsewhere, we are forced to the conclusion that the second case in that house was the direct sequel of the first.

In my opinion the most potent agents in causing the spread of diphtheria in communities are the schools—public, private and Sabbath schools. When we consider that it has been proven that the bacillus of this disease has been found in the mouth of patients some days *after* the apparent recovery of the throat lesion, we cannot avoid the conviction that it must also be in the mouth of the destined victim for a variable period before their presence is manifest by the usual symptoms denoting invasion. Therefore, that individual is a menace to her or his companions even during this period of apparent immunity. In many other instances the children are really victims of diphtheria while yet in daily attendance at school. In some of these cases, no doubt, the child, being anxious to continue its studies, does not feel ill enough to ask to remain at home. In others, where the little one speaks of feeling ill, the parents may not think it necessary to keep her from school, as it is not an unheard-of occurrence for some parents to reason that a complaining child must necessarily be a malingerer. In still other instances, the disease may be well advanced before the individual's attention is called to her condition by symptoms of pain and fever.

In any of these conditions the patient is a source of danger to her companions, and her presence at school may result in their infection and death.

I have recently had under my care a family in which five cases of diphtheria occurred. Two years ago an elderly lady died in that house with diphtheria. A few months subsequent to her death the premises were vacated, and the present occupants moved in. This family of six small children lived there for eighteen months without illness, until two years had elapsed since the death above noted, when diphtheria developed simultaneously in four of the children. Naturally, the first impression would be that here was an instance where diphtheria germs had remained inactive for two years; but finally conditions favorable to their renewed vitality had developed, and as a result a severe local outbreak occurred. But I really did not believe that was the solution of the problem, and upon questioning the mother closely, I ascertained that another child had remained from school a day or two, because it did not feel well, and this child occupied a seat adjoining a scholar who had a few days previously been taken ill with diphtheria. Here was the explanation of the outbreak in that household. A child with an attack so mild that the true nature of the illness was not recognized by the family, and which, it was thought, did not require the doctor's attention, infected four other members and caused one death.

This is but one instance in a great many where I have endeavored to trace a case of diphtheria to its source, and have been led to the school house.

The milk supply is frequently the means of disseminating the bacillus of diphtheria, and as one of the causes of the spread of this disease it is worthy of serious attention. It is really a culture media for the germs, and is peculiarly susceptible to contamination. Within a few months past an outbreak of diphtheria in the town of Melrose, Massachusetts, has been traced to the dairy of a man in whose family several cases of the disease occurred.

While it is not definitely known that

prominent outbreaks of diphtheria are due to contaminated water, yet it is reasonable to suppose that in some instances this is the case. It is known that colonies of the bacillus will survive for months or years in favorable situations, and it is not improbable that the germs may remain active in water for a short time, at least. Wells in proximity to cesspools may thus become a source of danger to those who drink therefrom; and the water supply of cities, contaminated with sewerage, may cause the diffusion of the specific poison. It is a well known fact that epidemics of cholera and typhoid fever have occurred in this manner, and it is not improbable that the prevalence of diphtheria in certain localities has been due to this cause. The folly, not to say criminality, of allowing cities containing thousands of inhabitants to take their drinking water from a source polluted by the refuse of a city containing hundreds of thousands, should be fully appreciated; and let us hope a day of advanced enlightenment may come when the police power of the state can be successfully invoked to save the people from themselves. The importance of guarding the water supply from contamination should be so thoroughly appreciated by all that the question of cost will not be a deterring factor. The so-called contagious diseases—diseases communicated through the agency of living germs—can never be eradicated so long as a large percentage of the people use water contaminated with human excreta.

In concluding this division of my subject it may be stated that it is not known positively what are the conditions necessary for the infection of the individual, but it is supposed that a lesion, an abrasion of the membrane of the nose or throat, favors it. No doubt individual or family susceptibility is a predisposing cause.

Having what we may now deem to be definite knowledge that the cause of diphtheria is a living germ, we are in a position to understand the importance of preventive measures, and are enabled to intelligently resort to such agents as investigation and clinical experience have shown to antagonize its propagation and growth.

The problem of preventing diphtheria has been simplified by the discovery of its bacillary origin; for we know that if we destroy the germ we will remove the cause.

The destruction of the bacillus may be effected by the various agents known as antiseptics or bacteriocides, and by a temperature of 212 degrees or more.

It is unnecessary to enter into the details of isolating and caring for patients; of cleansing and disinfecting bedding, clothing, premises and attendants; the rules to be observed by the family in the event of the recovery or death of the patient; the precautions as to ventilation; the mode of sterilizing the discharges from the patient's throat; and the duties of undertakers. These points have been admirably set forth by Dr. Ezra M. Hunt, the able Secretary of the State Board of Health in the annual reports and in special circulars, and they are accessible to every one.

But we may, with propriety, consider some of the questions of public policy in relation to the management of diphtheria, whether it occurs as isolated cases or a general outbreak.

Probably one of the most serious questions that may present itself to the health authorities is that of domiciliary quarantine. If thoroughly enforced, combined with disinfection of the premises and the effects of the occupants, there can be no doubt of its efficacy as a measure for the suppression of epidemics. But the hardships entailed upon the occupants of the house thus isolated from the community is fully recognized, and frequently the proper authorities hesitate to inaugurate this extreme measure of repression. The legality of house quarantine does not enter into this problem as a distinct issue, as it is a settled point of law that municipalities, in common with nations and states, may resort to this measure as a safeguard to the public health. But when we consider that the family quarantined may have been infected because of some previous dereliction upon the part of the health authorities of the city or town, the question of compensation might be raised.

In instances where, due to the lack of means, individuals ill with diphtheria cannot receive the proper attention or iso-

lation at home, they should be removed to a hospital provided for this class of contagious diseases. Frequently several members of a family are infected consecutively because the premises are too small to allow of perfect isolation of the original case. It is to this class that removal of the patient to a hospital is particularly applicable; and it then becomes a measure of consideration for their own safety.

Prophylaxis involves supervision of the schools, both the week day and Sabbath schools. There can be no doubt that this disease is largely propagated through the instrumentality of these agencies, where large numbers of children gather and intimately associate during the hours of study and play. As between the sexes, the relations existing between the girls of a school are more intimate than the fellowship between the boys, and herein is an element of increased danger to the girls. The reprehensible practice of indiscriminate kissing is largely in vogue in the female department of schools, and is directly responsible for the transmission of this disease in a certain number of cases. As bearing upon this point, my own experience has been that the large preponderance of school children attacked have been girls. When we consider that, after invasion, there is undoubtedly a period of local activity, without pronounced symptoms, during which the germs are elaborating the ptomaine that will subsequently infect the entire system, we can understand what a menace a child unconsciously affected with diphtheria in this incipent stage must be to her companions in a school room. I have met with a number of instances where children affected with diphtheria have passed directly from the school to the sick bed.

Therefore, as a measure of safety to the young, in whom there exists marked susceptibility to this affection, during the prevalence of dipthheria all public schools should be closed, and what are known as the infant classes of Sunday schools should be dismissed until such time as the disease is in abeyance. If this were done, there can be no doubt but that the progress of diphtheria in any community would be largely controlled before its ravages had made so many homes desolate.

My convictions upon this subject are very decided, and I feel that too much emphasis cannot be placed upon the assertion that attendance at school during the prevalence of contagious diseases constitutes one of the most grave perils of childhood. I am well aware of the difficulties that attend the solution of the problem, for we all admit the importance of these agencies for the education of the youth of our land. But when we reflect how many valuable lives have been, and may be, lost by reason of the dissemination of infectious diseases among school children, the closing of the schools during the prevalence of such diseases in neighborhoods should be considered one of the most important measures to be instituted for their eradication.

One of the potent factors in the dissemination of disease, and one to which but too little heed has been given, is the vacating of houses after the recovery or death of a patient ill with a contagious disease and its occupancy by another family that up to this time was free from infection. As in the instance that I have noted, many houses are vacated as soon as a patient has recovered, or soon after the funeral; and, in some instances, almost immediately re-occupied by another family, who are ignorant of the danger they incur. It should be the province of health boards to prevent this. Physicians are required to give information of cases of contagious disease, and to report deaths due to such causes. For the purpose of preventing the evil above referred to, the original notice of the existence of a case of contagious disease in a house should be sufficient, and it then should be the duty of the inspector of the local board of health to caution the head of the family not to vacate the premises without first notifying the board of such intention to move, under penalty of a fine sufficient to exert a deterring influence.

After the health authorities have received such notification of intention to move, then all the effects of that family should be thoroughly disinfected before they are allowed to be taken from the premises.

After the house is vacated, it should be unlawful to rent it again until it has been properly cleansed and disinfected; and the cleansing and disinfecting should

be under the supervision of the board of health.

Boards of health should also be vested with authority to prevent families from vacating infected premises when, in their judgment, such removal would be detrimental to the health of the community.

As inspectors of boards of health are public agents charged with the grave and responsible duties of stamping out contagious diseases, it should be mandatory upon them to give personal supervision to the cleansing and disinfection of premises *immediately* after notice has been given by the attending physician that such disease prevails in a house; and not wait, as is now the custom, until the malady has spent its force in the family. Then, after the recovery or death of the patient, the premises should be *re*-disinfected. Failure upon the part of a health inspector to personally examine infected houses at least once during the progress of a case of contagious disease, should render them liable to penalties equally as severe as may now be visited upon the physician who fails to make prompt report of the existence of such patient in his practice.

To enact sanitary laws for the guidance of busy doctors, and impose penalties to insure their observance, and at the same time make other sanitary regulations and select men at a liberal salary to carry out their provisions, without the imposition of a penalty for non-observance of duty, is an unfair division of the responsibility of conserving the public health.

It should be impressed upon all who have to deal with this disease, whether in the capacity of sanitary officials or as medical advisors, that prophylaxis is the true, and, perhaps, only sure way of combating diphtheria.

If we accept as true the bacillary origin of the disease, then must we acknowledge that it is *primarily* a local affection, followed later by systemic involvement. But it is the *general* symptoms that first attract attention to the patient, and frequently while yet there are no signs of pharyngeal invasion, Now, if the general involvement is due to a poison generated at the seat of local lesion, we must assume that such poison had been formed *prior* to the onset of malaise and fever. If so, then there is but one conclusion to be arrived at—and that is the bacilli were present in the nares, pharynx or larynx, and had already generated sufficient poisonous products to infect the system, *before* the chasacteristic exudate was apparent to ocular inspection. Thus, when the doctor is called upon to treat the patient, what was a local affection, has now become a systemic disturbance, with, perhaps, even at this stage, only slight evidence of localization. Hence, it is now too late to prevent general infection, although treatment may modify the progress of the malady. Unfortunately, the chances are that further advance of the disease will not be prevented, for we must admit there is no known specific for this affection, once it has seized a victim. Despite all treatment, the seemingly mild cases are liable to die of heart paralysis, and the severe cases may pursue an uninterrupted course to the grave. But this sweeping assertion must be qualified by saying that the death rate has been lessened within recent years, as the value of the recumbent posture as a life preserver is better understood, and the early use of antiseptic washes does modify, in some instances, the severity of the systemic poisoning. But, nevertheless, these agencies are not specifics.

But if we anticipate the results thus depicted, and when the disease threatens a community or family, institute *pre*-invasion treatment of the cause, by purifying the unclean places, isolating those who are sick or have been exposed to the contagion and prevent the risk of the healthy coming in contact with infected localities, we may then have the satisfaction of securing the ideal results contemplated by the votaries of sanitary science.

CAMDEN, N. J.

TREATMENT OF DIPHTHERIA.

BY W. BLAIR STEWART, A M., M.D.

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A CAREFUL clinical study of diphtheria and scarlatina proves the facts that when one is epidemic the other usually accompanies it; that both diseases pursue uncertain, irregular and various courses; that both are often present in the same person at the same time; that every remedy will fail in certain epidemics and that almost any practical treat-

ment will succeed in another; that the prognosis of each must be very guarded, and parents must be warned at the onset of possible complications and sequelæ. In assuming the treatment of every case of diphtheria, make up your mind to give it your undivided attention and to fight it night and day until controlled. It is *absolutely imperative to isolate* every case, no difference how mild or uncertain; to strictly enforce thorough antiseptic and hygienic measures and to put the patient to bed, when it first appears, and keep him there until every trace of the disease and every complication has entirely disappeared. Do not be misled into allowing these cases to sit up or to go around, for these are the ones that often cause most trouble and prove most fatal.

Another point: If the circumstances of the family are such as to warrant it, it is best to obtain the services of a trained nurse. If this is not possible, put the case into the hands of some member of the family or one of their friends and advise them of the part they are expected to take in treating the case. It is one thing to prescribe and advise in a case of diphtheria, but it is not every case that receives the fulfillment of your directions. You may order a gargle or spray and, when they use it, it may only reach the buccal cavity, while the throat is never touched It has been my experience that mothers and patients know very little of the proper use of a spray, and consider its superficial use to fulfill all indications; when, in reality, the medicament has been thrown on the tongue, gums and hard palate only. It is not wise to trust to the "common sense" of untrained nurses and parents, but have your directions followed out in your presence, giving such advice and instructions as will insure thoroughness in every thing that is done after you are gone. Never lose sight of the fact that *diphtheria grows best when the patient is asleep.* This serves as a valuable index in treatment, which is to make your directions imperative for treatment to be followed night and day. When it is time to make local applications, to give nourishment or to administer medicine, awaken the patient. Do not go upon the principle that rest is more advantageous than medicine, for the membrane is something that knows no rest until checked by appropriate remedies or by the resistance of vital cellular action. Fretting, worrying and rebelling on the part of children offers no excuse for neglecting treatment and making it thorough in every case. Bearing in mind these facts, and having impressed them upon yourself, the nurse and parents, you are ready to begin active treatment. Briefly stated, the treatment of diphtheria resolves itself into (1) dietary treatment; (2) internal treatment; (3) local remedies.

1. DIETARY TREATMENT

The first principles of dietary treatment are embodied in two statements, viz: (1) your patient must be fed at *regular intervals;* (2) diet must consist of easily assimilated, rich, stimulating, nitrogenous substances.

(1) *Regularity in Feeding.*—Satisfactory results are rare in those cases that are fed at irregular intervals and in those cases where six to eight hours are allowed to intervene before nourishment is given again. It is essential for nourishment to be given at regular intervals of four hours during the day and night regardless of sleep. It is best to administer all nourishment in moderate quantites and do not give it cold.

(2) *Character of Diet* —Fresh, rich milk will form the basis of the diet and can be used alone or as a vehicle with which to combine other articles of food. From four to eight ounces of milk can be given hot at regular intervals of four hours. If this seems to disagree, to form large sour curds or to cause nausea, it is wise to add a small amount of lime water to correct acidity and to prevent the formation of such large curds. Other cases may require the addition of a small amount of pepsin to aid its digestibility. The white of an egg or the whole egg, stirred in with the milk when cold, and heated, adds to its nourishing principles. Bovinine, meat extracts and juices are often combined with milk with the best results. If there is need of special stimulation, add ten to sixty drops of the best brandy to each quantity of milk given. A regular egg-nog combines nourishment as well as stimulation. In those cases where milk is refused if not desirable, whey or wine-

whey can be used in its place. A good wine-whey is made by taking a cupful of milk and bringing it to a boil; stir in two to four tea-spoonfuls of the best sherry wine and as soon as thoroughly curdled, strain. Give from one to three table-spoonfuls every hour. Wine-whey may be sweetened to taste with granulated sugar. Beef juices and extracts can be added to wine-whey. Beef pulp, from which all fibre has been removed by scraping with a dull knife, will afford variety and very nourishing qualities in older children. A potato, baked until mealy, can be given occasionally. Milk jelly, chicken jelly and wine jelly are desirable. Rich meat broths can be used but beef tea is not desirable. Arrow root, tapioca, sago, rice and gelatin are not objectionable if thoroughly cooked and not given too sweet. Many valuable prepared foods are on the market. A recent case of diphtheria made a good recovery under the use of maltine with peptones. Soft boiled eggs, oyster soup, peptonized oysters, rare beef, light puddings and custards may be given occasionally. The juice of an orange is very soothing and palatable. *Avoid* veal, mutton, pork, fried and mashed potatoes, tomatoes, cabbage, turnips and the heavier articles of diet. Rectal alimentation is indicated in those cases where food can not be swallowed or retained in the stomach.

2. INTERNAL MEDICATION.

After a careful study of the various methods of treatment outlined by our various authorities, the following conglomeration of remedies is noted, which constitutes a valuable argument in favor of a rational, uniform, and scientific method of treatment. Just note the long list of internal remedies; oil of turpentine, sodium salicylate, salol, sulphur, borax, peroxide of hydrogen internally, salts of mercury, belladonna, sanguinaria, ipecac, antimony, preparations of iron, chlorate of potash, hyposulphite of soda, liq. potassæ, arsenic, glycerine, arsenite of copper, carbolic acid, mineral acids, iodine, coal-tar products, pepsin, pancreatin, trypsin, quinine, alcoholics, strychnine, strophanthus, gallic and tannic acids, ergot, etc., etc. There is no doubt but that these remedies will fulfill certain indications, but the thing we are striving for is a uniform constitutional treatment. When the opinions of all, together with their clinical experiences, is summarized, the majority favor the so-called "specific treatment" with bichloride of mercury and iron.

The first indication in general treatment is to establish free action of the bowels and emunctories with salines, then follow with other measures. Following the experience of others, it has been my custom to give:

℞. Hydrargyri bichloridi . . . . gr. j
Tr. ferri chloridi . . . . . f. ℥v
Syr. aurantii flor . . . . . f. ℥j
Aquæ q. s. ad . . . . . f. ℥iv
M. Signe.—One teaspoonful, in water, every three to four hours, to a child of eight or ten years.

Push the mercury short of its toxic effects and watch it closely. The iron acts as a balance for the mercury, is beneficial for its local effects and is a good tonic. Biniodide of mercury, gr. 1-100 to 1-60, every two to four hours, is preferred by some. Chlorate of potash has long been used with iron internally, in varying doses, but is very irritating to the kidneys and depressing to the heart. Infusion of digitalis is a valuable remedy for its diuretic effects as well as being a stimulant. It is indicated where there is albuminuria, a diminished amount of urine or heart weakness, to be given in half-teaspoonful doses every two to three hours. The great objection raised to all preparations of iron and Waugh's "free chlorine mixture" is the objectionable taste and great trouble necessary to force children to take it. Every effort should be made to disguise the objectionable taste of the iron.

Diarrhœa is often present and varies in character from a true diphtheritic discharge to a mere looseness of the bowels. In all cases it is best to give one-tenth grain doses of calomel every two hours, for twelve hours, and if not checked by that time to administer sulpho-carbolate of zinc or salol in one to five grain doses every one or two hours, as necessary.

When heart failure—paralysis of the heart—is threatened, immediate stimulation is required. Give carbonate of ammonia or aromatic spirits of ammonia, in hot water, as often as necessary, always watching not to over-stimulate. Paraly-

sis is best treated with tonics of iron-arsenic and strychnine, and electricity locally. Fever varies with the condition of the throat and the malignancy of the disease. In high fever—104° F.—use cold sponge baths rather than the depressing antipyretics. A pill containing acetanilid, gr.j; quininæ bisulphas, gr.j; and cocainæ hydrochloras, gr. 1-16; may be given every hour for fever, but must be watched and not continued. Local cleanliness of the throat will do more to prevent high fever than medicines. In brief, it is necessary to avoid all depressing treatment; to use stimulants as necessary and to obtain full action from your mercurial.

3. LOCAL REMEDIES.

Here lies the success or failure of your treatment, for, if local measures are neglected for a few hours only, failure will often follow. Let your motto be *cleanliness of the mouth, nose and throat.* The day for the use of escharotics and caustics is past and, as they were used, were productive of more harm than good. If you are one of the class that believes that diphtheria is a constitutional disease with local manifestations, then it is evident to you that caustics will not check the trouble. Some authorities claim that when it is confined to a mere point, a thorough application of nitrate of silver solution will check it. This is very doubtful, for it is always a question afterward whether the case was one of a true diphtheritic type. At all events it will do no harm to try this method, if the case can be taken at the onset when the exudation is a mere point. Do not practice it after the exudation has spread. Forcibly detaching the membrane is to be condemned, as it is productive of deep ulceration, unnecessary destruction of tissue, severe hemorrhages and affords a more ready ingress to the circulation of the poison of the disease. You must make all applications gently. Discourage as much as possible the habit of swallowing the exudation, as it causes diarrhœa and intestinal inflammation of a diphtheritic type. Impress upon your older patients the necessity of free expectoration and compel the younger ones to do so if possible. Medicines can be brought into direct contact with the throat by means of gargles, direct applications and sprays. Gargling is the most effective, in those who can do it properly, as more of the medicament is brought into direct contact with the membrane of the diseased parts. Next in efficiency is the direct application with brushes or swabs of soft absorbent cotton. The spray is least efficient as it is not often as thoroughly used as necessary and takes much more time.

Medicinal peroxide of hydrogen (strength from fifteen to thirty volumes) is the best local application known. It is a local antiseptic in destroying germs and ptomaines, it aids in disintegrating and loosening the membrane, assists in rapidly restoring the parts to their normal condition, stimulates the surrounding weakened cells and prevents spread of the membrane. It is not poisonous in its action and can be taken into the stomach without fear of toxic symptoms. It is most too strong to use in its purity, except in very severe or malignant cases, and is best used when diluted with glycerine and water. Use two ounces of hydrogen peroxide, one ounce of glycerine and sufficient water to make six ounces. Use freely as a gargle, local application or spray at *intervals of one-half hour, day and night,* until the disease is checked, then lengthen the intervals to one hour. Let me impress again that unless the gargle, local application or spray, is thoroughly done each time good results can not be obtained. Some carry these applications a step farther by making submucous injections under and around the affected area in the throat; acting upon the principle that the germs are in the submucous tissue also—a fact. This method is questionable, is hard to follow, and, unless used with greatest care, will produce deep ulcers.

Other local remedies find favor, such as lime water solutions of salicylic acid and lactic acid, thymol, pepsin, trypsin, papoid, chlorine water, carbolic acid, tr. iodine comp., tr. ferri chloridi, persulphate and pernitrate of iron, borax, alkalies, permanganate of potash, mineral acids, turpentine, etc. Inhalations of hot steam, impregnated with turpentine, eucalyptol, menthol or thymol, are very soothing and desirable. When nasal diphtheria is

manifest, cleanse the nose thoroughly with the peroxide solution at regular intervals. After thorough cleansing, Dr. Wm. F. Waugh recommends one thorough injection with a solution of nitrate of silver, (ten grains to the ounce), not to be repeated, as very efficacious. When there is laryngeal diphtheria (true membranous croup) treat as indicated in my article on "Membranous Croup" (TIMES AND REGISTER, November 28th, 1891). Loose pieces of membrane and mucous should be removed gently. Ulcerated patches, when cleansed, should receive an application of aristol, two parts, and boric acid, one part. Inflamed glands on the neck should be thoroughly greased with ichthyol ointment (five to ten per cent.), followed by dry heat. Repeat three times daily.

In conclusion, let me urge that you do not jump from one form of treatment to another, for you will lose more than by adhering to the same treatment in that case. When the height of the disease is past and the patient is in position to recover, many physicians often become over anxious and change the treatment with fatal results. A brief summary of the present article outlines absolute rest in bed until every complication has disappeared; a course of stimulating, nutritious diet at regular intervals of four hours; internal stimulation and avoidance of depressants; bichlorides of mercury, to verge of tolerance, with tr. ferri chloridi to guard it and the local application of peroxide of hydrogen, at half-hour intervals day and night, regardless of sleep or personal objection on the part of the patient.

BRYN MAWR, PENN.

PEROXIDE OF HYDROGEN IN DIPHTHERIA.

BY J. A. DEARMAND, M. D.

AGAIN is the truth of the adage, that the human family acts very like a flock of sheep when alarmed, demonstrated. The proneness of medical men to fly off the handle and follow false gods has become a by-word and a sneer with the educated laity. Every new drug or combination of drugs which is ushered into commercial existence finds a drove of medical men who are convinced on very slight acquaintance that a cure-all has at last been found and they proceed to spread its praises with the lavish hand which enthusiasm always displays. This tendency to praise before fully investigating is to be deplored for several reasons. In the first place it puts a value on an article which is only valuable to the company who hold the right to make it. In the second place when the first burst of enthusiasm has given place to the quiet investigation by the bedside and the new applicant for popular favor is found utterly useless we lose faith in the judgment of the men who aided in booming it. We are certain to get the idea that these men have had some motive other than the good of their worshippers when they have lent their voice and pen to boom an article which we find under the most promising circumstances is worthless. If medical men would only investigate and then give the results of those trials there would not be the ground for so much back-tracking. And there can be no denial that this booming a remedy to-day and damning it to-morrow is very bad for the reputation of the profession. When the medical leaders, or the recognized leaders of any special branch of the healing art, find a remedy which the superior opportunities for observation enable them to test and they find it right and safe to advise their pupils the world over to use, then when these men suddenly turn about and denounce the very thing they lately were so enthusiastic over we, the profession at large, come to view new preparations with suspicion. We are justified in letting them severely alone until the test of time has settled the value the article possesses and then often we can find such a variety of opinion that the novice can't tell whether or not to adopt the new remedy. Every doctor in the land finds his mail filled with circulars announcing the agency or sale depot for some new remedy. Every one has the certificate of some doctor of more than local renown. The progressive physician who wishes to keep step with the profession and he orders the new candidate and he finds it is expensive but he also finds that a month's time will bring another candidate which is boomed in the same way. So it has come to be a fact that the profession can not

rely on the evidence of the leaders at the medical centres when it comes to sorting the useless and expensive preparations from the really meritorious ones. The fiend who gives samples and book marks and other little toys seems to rule the roost, and until the next man gets his toys out there is no sure thing for anybody except the maker.

Another matter that has done much to make trouble in medical ranks is the semi-proprietary medicine maker. He appears with the very plausible story that he puts the formula on the wrapper and all that he claims is the purity of drugs used and the excellence of fabrication. This gets the doctor. He thinks this new combination is just what we want. It gives the drugs we want to give but are in doubt about combining, in a fine form, and we will adopt the remedy. Furthermore in return for the bookmarks and paper knives we will say that the combination is one that theoretically should do wonders and as we have used it, it will do wonders, and soon the patient finds out that there is not much use in paying a doctor one dollar for a prescription which calls for Buncomb's bromides or Ruleum's uterine straighten-out. In this way the article which, mind you, is only prepared for the profession finds the sale the wily maker wants, and the old proprietary dodge is worked over again, and the gold brick man gets away with the boodle.

These things are matters of knowledge to the profession and yet we are forced to try every new remedy with the fear that we have been gold-bricked. Go to your druggist and ask him how many substitutes he has for iodoform. They are legion almost and each one is pronounced the very best by surgeons of national reputation. You try them and many are utterly useless. So it is of so many things that we almost wish there were some plan by which the desired knowledge of remedies could be had without paying so dearly for the knowledge.

At a recent meeting of the American Pediatric Society the eminent Prof. Jacobi read a paper in which he sat down on a remedy which has held a place as a most useful and valuable aid to our armamentarium. The doctor said in general that he had dropped the peroxide of hydrogen as a more or less useless agent and a dangerous one as well. In the discussion of the paper which followed there seemed to be a community of sentiment, each speaker giving the remedy which has been hailed as a wonderful article a biff in a weak spot. This is very unfortunate, is the knocking another idol down. If we only could have fewer idols our sensitive natures would not be so severely shocked by the rude breaking of them so frequently. Indeed the poet might be paraphrased to

> I never loved a pill or powder,
> To gladden me with its fine effect,
> But some big man came from under,
> And gave it one in the neck.

And so it seems to be.

In order that we may view this last annihilated candidate for professional fellowship, it might not be amiss to consider what the treatment of diphtheria was before the appearance of the peroxide of hydrogen. The common plan of treatment was the use of acids locally. I am not prepared to say that this was the plan observed by the gentlemen who make and unmake drugs, but this was the treatment of the rank and file of the profession. Those were the days when it was bad to have diphtheria and worse to get the doctor. Many a child died a horrible death and on whose tombstone it could be truthfully said, "Died of a nitric acid bath." Strong acids were used recklessly. Future historians will refer to the early treatment of diphtheria as the Black Hole of Calcutta in the medical revolution. The theory was that if the membrane could be killed the child would recover. The disease was regarded as a local one all the time instead as only at the outset as we now know. Carbolic acid being a little less dangerous to use and being sufficiently destructive came into use later on. Less than ten years ago I saw a case that a good old doctor had treated by swabbing the throat, mouth, tongue and teeth with pure carbolic acid and the horrible agony that the poor little boy suffered will be a memory with me as long as I live. The grim messenger never found a soul so glad to welcome the sweet sleep which knows no waking.

When the peroxide of hydrogen came into public notice it rapidly took a place

in the safe treatment of some diseases—only one of which interests us now. It was found that, owing to the loose union which bound the extra atom of oxygen, the drug was an excellent agent for the destruction of those low forms of life, whose entrance into the blood in an active state, or after a change into a state of virulent solution, had rendered them dangerous to the health of the blood. This ought to have been enough but it was not. Enthusiastic investigators knowing something of the drug, and guessing a good deal more, found that it would do wonders in several directions. So a remedy which had done so much to set aside a treatment, which can only be mentioned under the breath, was made to do duty all along the line. Not content with using it for a purpose it accomplished with signal success and uniformly good results, it was trotted out as a cure-all; and now it is about to suffer a professional guillotining because a wrong use of it is attended by undesirable results. The main objection to the drug as voiced by the convocation of specialists, is that when used as a spray, it, having the effect of coagulating the albumen in the saliva, forms new seats for the attachment of diphtheritic membrane. Whether it does or not is a question. For myself I do not believe it does. The fact that the drug is perfectly non-irritating in the common acceptation of that word is proof conclusive that, unless the remedy is used with needless frequence, it cannot affect the healthy tissue and therefore cannot occasion new seats for infection. If there is one thing clearly recognized in the treatment of this disease, it is that the danger (croup being omitted) is from systemic poisoning, pure and simple.

The disease is a septic one, and he who thinks he has the disease cured when he dislodges the membrane has much to learn. But the student will find that the fever and prostration are lessened in proportion to the success which attends his efforts at removing the membrane, provided that be done without injury to the underlying parts. All that anybody can claim for the peroxide of hydrogen is, that when brought in contact with diphtheritic membrane, it causes it to crumble and scale off. In other words, it dissolves that part of the membrane which is in a dying or dead state It has no effect on the deep seated membrane. Nothing has that except the acids which ignorance used to smear on so freely in the name of scientific treatment. If you can keep the membrane clear of the accumulations which are prone to gather, and whose accumulation is evidenced by the septic condition recognized in the pulse, you have done worlds for your patient. I do not think the spray is a successful mode of applying the remedy at any point. It always excites discomfort when used in the nostrils, and lime water is better and safer there. To use a solution of sufficient strength to do the work in the nostrils, you must cause pain. To spray the throat, when a few spots only are occupied by membrane, looks like hunting sparrows with a gatling gun. The plan of touching the spots with a bit of cotton wet in the solution is no more difficult than to effectively spray the surface, and it has the additional advantage of causing no dangerous trouble by way of treating surfaces which are healthy.

Buy your peroxide of hydrogen just as you do your other drugs—from a reliable house. Do not be misled into the notion that there is any hocus pocus in this drug any more than there is in any other. Then again, do not think, as is so often done, that because the article is tasteless, it can be used without any especial care. We know that for many purposes a solution of the bichloride is invaluable, and yet we do not use a fixed and unalterable strength in every case. In using the peroxide, when the membrane is thick and becoming dark, it is very necessary that it be removed, and then a good strength is called for, but when the local patches become small and thin, manifestly a reduction in strength can and should be made.

I am not wedded to any drug. Drug idolatry is a species of mossbackism which it is wise to avoid. But I do not see the wisdom of discarding a remedy which surely does all that should be expected of any remedy and this unless something better can be offered to take its place. In the discussion of this question above alluded to, not a gentleman offered a substitute, but all agreed that this one was of a dangerous nature. Let us admit that; that it is dangerous, and that the

volunteer statement that it could be applied to any surface without doing any more harm than water is untrue. Would that justify the wholesale denouncing of a remedy that stands alone in its particular field, and I may say will still hold the fort, despite the onslaught made upon it? When a remedy has been found that will do better service than any other now in use I am glad to accept it and make the change, but I do not think it wise or prudent to swap horses while crossing a stream. I have used the peroxide for many years, never as a spray except in cases where the removal of the membrane was imperative, and a few hours time meant sure death, and I have yet to see a case made worse by the proper use of the drug. In those cases where a misguided notion prompted the removal of the membrane by spraying all the mucous surfaces in sight, the throat was made sore and damage was done. But what of that? Is not that true of other remedies used without discretion and without brains? In the absence of this remedy what shall we use? Go back to the acid bath? Let all local treatment go and wait for the inevitable and the undertaker? When we have something better offered let us lay aside the peroxide, but until then let us hold fast to that which is good. This wholesale denouncing of the remedy will have at least one good effect: It will bring to their senses the men who have been proclaiming that no harm could come from a remedy which appears so mild. If care is emphasized in its use the value of this remedy will not be misunderstood nor its usefulness be overlooked. For that reason this last trouncing of the jacket will do the boy good.

DAVENPORT, IOWA.

DIPHTHERIA.

By F. W. FRANKHAUSER, M. D.

[Pathologist to Reading Hospital, Reading, Pa.]

DIPHTHERIA is a constitutional disease of an infectious character, contagious, with local manifestations in the throat, nose, mouth and mucous membranes. The most malignant of all contagious diseases, with possibly the exception of small-pox.

The character of the disease is such that the special poison is generated and always enters the system from without. Undoubtedly of a bacteriological character, ectogenous or endogenous in their growth, if proper conditions are present, warmth, nutriment and possibly some moisture.

That it is a constitutional disease is shown by the conditions we find in many cases, where the patient is overwhelmed with the poison and dies before the local manifestations are present.

Of its contagious character we need say nothing, as all who have seen diphtheria have learned by sad experience, that the poison is of an organic character, is such that its reproduction is unlimited, its life is several days or weeks in the atmosphere or clothing, where it may find the proper place for living. What certain conditions are necessary, beyond heat, moisture and nutriment, have as yet not been found, but that much is certain, as has been shown in all epidemics..

There are many persons that escape this dreaded and fatal disease, while others in the same family, under similar conditions, are stricken down by the overwhelming onset and in a few hours, as it were, they have passed over the chasm that separates time from eternity, and the great beyond.

Diphtheria occurs in epidemic or endemic forms, generally in epidemics of more or less severity.

Contagion and some of the plans of transmission:

(*a*) By direct contact with the disease or patient.

(*b*) By the contagion coming in contact with clothing and retaining the reproductive character until a favorable soil or bed is found for the growth.

(*c*) By pets,[1] as kittens or chickens are known to have had diphtheria, and communicated the disease to children and members of a family—even adults.

(*d*) By furniture, floors, carpet, paper on the walls, by drinking vessels, or by coming in contact with anything that has become contaminated with the disease.

(*e*) Unsanitary conditions of school buildings, as well as private dwellings. Many buildings are exposed to the gases and foul odors arising from cesspools and sewers, to which the traps and drains

[1] Zum Krank d'Housegeplugels, 1882, p. 104.

lead. Many houses do not have ventilating flues to their cesspools, or to their traps leading to their cesspools or sewers, and thus allowing the foul gases to enter the rooms, slowly but surely undermining, as it were, the health of the children, and in that way, produce what may be called a predisposition to the disease.

(*f*) Exposure to cold. A case was reported to the Reading Medical Association at the November meeting of a child that was suffering in our Reading schools from incontinence of urine, asked permission to leave the room, but being refused, the urine dribbled, causing her clothing to be wet, sitting near an open window, took a chill, and in a few days had diphtheria from which she died.

(*g*) By air. It has been shown that the conditions of the atmosphere are sometimes such as to cause the germs to be carried from place to place, and an epidemic extending over a large territory may spring forth in a few days.

(*h*) By public conveyances, such as carriages, cabs, street and steam cars.

Pathological conditions present :

1. There is a hyperæmic condition, then congestion, after which comes an exudation of plasma, with the changes of the epithelium that is thrown off, causing a deposit of fibrin and altered epithelial cells, containing the bacillus of Loeffler; whether the bacilli are the cause or the effects of the disease has not been fully settled. This condition extends over the pharyngeal wall, tonsils, uvula, posterior and often the anterior nasal chambers, sometimes extending into the trachea and mucous membrane of the eye. As the disease progresses the poison extends deeper, the membrane forms very soon after being detached, continuing for a week or ten days, or until the patient dies. When convalescence takes place the membrane loosens and does not replace itself again.

Symptoms.—In most cases the disease has a prodromal stage, lasting for one or more days, coming on in from two to ten days after exposure to the poison. In some cases the onset is quite sudden. The patient feels indisposed, has some fever, chilly sensations; nausea and vomiting, loss of appetite, occasionally convulsions, pain in swallowing, pain in upper and lower extremities, headache, temperature from 101° to 104° F.; on inspection, pharynx and tonsils are red, irritated, possibly small specks of a white deposit, in twenty-five hours spreading over the entire pharyngeal wall. In some cases the deposit of membrane is present almost as soon as the patient complains, and spreads over the pharyngeal wall in a few hours. In others the lymphatic glands of the neck are involved, causing swelling, and sometimes suppuration. In some cases the deposits of membrane may not be well marked at any time. In a few days the membrane becomes of a dark color, often quite black, the breath or odor coming from the membrane being very offensive; even the air of the room partakes of the offensive character. The respiration becomes labored and carried on through the mouth, owing to the nasal passages being closed with the membrane, thus occluding the air.

Saliva dribbles from the mouth, with a constant desire to swallow, pulse soft and frequent, urine scanty and high in color, later in the disease loaded with albumen, and an œdematous condition may be present. The heart's action is at first strong, but as it gradually becomes overworked by the poison in the system, it becomes weak, and sometimes degenerates and becomes very feeble, and often stops suddenly from heart failure, or paralysis. In some cases there is present paralysis of the muscles of deglutition, possibly due to involvement of the peripheral branches of nerves supplying those parts, or from myelitis from the poison in the system. This paralysis causes difficulty in taking food, or medicines, the liquid coming out of the nostrils and sometimes entering the trachea, and thus causing choking.

Treatment —In no disease of childhood is the physician's skill tried more, in no disease is there a more anxious look, asking for help, than in diphtheria; neither is there any disease in which there is more uncertainty as to final results, no disease so treacherous, no telling how soon you will have an attack of convulsions, heart failure or paralysis of the heart. If the patient can be seen early in the onset of the disease much may be done, but often the patient is more than half dead before you know anything

is wrong. Where the patient is taken very suddenly, and severely, the patient often dies before remedies can have any effect upon the disease.

The treatment may be divided into general and local. The general treatment is such that no definite plan can be laid down, but each case becomes a law unto itself, and the physician needs to make his own plans for each case. Early, a few large doses of quinine, large enough to produce an effect on the system rather than in tonic doses, will assist in reducing the temperature and also prevent to a certain extent the migration of the white corpuscles or leucocytes.

Where the temperature remains high, bathing, the cold bath, cold pack, or even a warm bath, will give moisture to the body, and in that way open the secretions of the skin. For the nausea, white wines, hot water, bismuth and a host of others; calomel early in one-fourth grain doses for several days. We should always remember, and in no disease does it apply more fully than in diphtheria, that, as Prof. Biddle used to say, "when in doubt, stimulate." In no disease is stimulation indicated earlier than in diphtheria, and in none better borne. Of the stimulants, wines, whisky, diluted alcohol, carbonate of ammonia, rank among the first. Tinct. ferri chloridi also has a tonic, and possibly a destructive effect upon the disease, but it certainly is very supporting. As to the chlorate of potassium, I could never understand how it would or could act and have dropped it for several years.

℞ Tinct. ferri chloridi . . . . . ℥ iv
Syrupi limonis . . . . q. s. ad ℥ iij
M. Sig.—One teaspoonful every hour for an adult.

I have found this very useful. As to antipyretics, we have quinia, acetanilid, phenacetine, but let us always remember not to depress the heart's action. When the heart's action becomes weak, digitalis and strychnia. To the swollen glands of the neck some use ice. I prefer hot applications, such as hot oil, or flannels wrung out of hot water and placed around the neck. Inhalations of slaking lime, or infusion of some aromatic herb, will often assist in loosening the membrane, and thus assist the labored respiration.

The room should be well ventilated, all unnecessary furniture removed, the floors bared, except possibly some carpet for the nurse to walk on. The patient should be isolated from all members of the family, except the nurse. Absolute rest in bed, as rest is important until convalescence is well advanced; as often the heart muscle becomes weakened and by the least exertion the heart's action stops by paralysis of the heart, or heart failure, and the patient drops over dead.

When cyanosis comes on and the respiration labored, oxygen by inhalation should be beneficial.

As to local treatment, as diphtheria is generally a disease of childhood, it is almost impossible to use a local remedy properly. Many remedies have been proposed and many used. But, with the addition of stearate of zinc salts, there is no reason why aristol, boracic acid, pepsin, and even calomel should not be used by an insufflator, and the powder be blown over the diseased surfaces. In older persons a gargle, consisting of hydrarg. bichloridi, $\frac{1}{2000}$, may be used to advantage.

All vessels containing sputum and other discharges should be cleansed with boiling water and bichloride of mercury. All cloths used for taking up discharges or sputum should be burned.

In the nasal passages, involved by the membrane, a solution of boracic acid gr. x to the ounce, as an injection or cleaning solution, bichloride of mercury $\frac{1}{2000}$, can be used, then the stearate of zinc powder. Peroxide of hydrogen seems too irritating for those passages.

Another important point in treating cases of diphtheria is proper feeding. Food that is easily digested or predigested should be given often and at stated intervals, day and night. Milk forms one of the important articles of food, as it can be prepared in many ways, it can be given cold, hot, in junket, egg nog, in corn-starch, ice cream, tapioca, malted milk, peptonized foods.

Beef juices, cold drinks are very grateful to most patients, ice, sucked and swallowed in small particles. In albumenuria, diuretics, with heart tonics, digitalis, strychnia. If the heart's action will bear it, a diaphoretic and hot application to the

region of the kidney, of hot water, etc. In cases of paralysis of the muscles of deglutition, strychnia and faradism rank first; general tonics.

Even after treating the little sufferers as scientifically as we know how, they will sometimes, and possibly often, look at you with such a distressed look, as much as to say "O, doctor, help me," when we are powerless to help them, and after they have gone, we can but say, "We tried to do our best."

Ruffer[1] reaches the following conclusions in regard to the processes taking place in the diphtheritic membrane:

1. The bacilli of diphtheria are present in the most superficial part of the membrane only; that is, in a place where they are well within reach of medicinal agents and observation not without interest from the point of treatment.

2. In the diphtheritic membrane there is an active struggle taking place between the amœboid cells in the membrane and the micro-organism. In other words, the diphtheritic membrane is a battlefield for amœboid cells and the pathogenic microbes of diphtheria.

3. The reason why the bacilli do not actually penetrate into the tissues is probably that, as soon as they try to do so, they are arrested by the amœboid cells present in the diphtheritic membrane.

Allow me, if you please, to mention a few cases that have come under my care, to show how treacherous this disease is:

E. S., aged three years, had an attack of diphtheria for about ten days. The membrane had all gone; heart's action good; convalescence had commenced fairly well; taking nourishment, and seemingly bright; as far as could be seen, on a fair road to recovery, when one day his grandmother raised him up in bed to give him a drink of milk, when he dropped dead in her arms.

S. G., aged seven, had a severe attack of diphtheria. In two hours after she commenced to complain, her whole pharynx and tonsils were covered with the membrane; in eight to ten days, was on a fair way towards recovery; membrane all gone; temperature, 99.3° F.; heart's action good; kidneys acting well; taking nourishment; when suddenly, as it were, the kidneys ceased to act, œdema commenced, and in twenty-four hours after the kidneys ceased to act, had a convulsion and died.

R. P., aged five, had a very mild attack of diphtheria, only a few spots of membrane deposited; in six days was convalescing nicely. One evening ate some ice cream; in ten hours afterwards had a convulsion; and in six hours more was a corpse. It is possible that the cream was not fresh, nevertheless the cream, or something else, caused the convulsion, and he died.

230 S. Sixth St., Reading, Pa.

[1] *British Medical Journal.*

Dr. Kauffman has changed the name of his weekly medical newspaper to the *Chicago Medical Bulletin*; stating that he was unaware of the existence of Dr. Shoemaker's journal. Now we feel better; since we know that ignorance of matters medical in the small portion of earth still unannexed to Chicago is characteristic of that city's doctors. Recently, a Dr. Cesna, of Chicago, inquired if there were such a journal as the Times and Register! Wake up, you Hoosiers! Here's the World's Fair right on you, and you're not awake yet. Talk about Philadelphia's sleepiness—it is tetanic hyperesthesia beside some of these Chicago people.

We desire further to remark that the man who charged Philadelphia with somnolent tendencies did not do so after coming in from a ten-mile drive over her streets in a light buggy that does not fit the tracks. The condition of our city streets is a disgrace to the country. It would hardly be tolerated in any tenth class western town. The antiquated cobble paving is bad enough, when at its best, but it is now so full of holes that a vehicle can only go over it at a walk, or risk breaking its springs. We have two fine streets paved with asphalt, Broad and Diamond; but the omnibuses have broken up this paving to such an extent that it is worse than the cobble. And then the dirt! If Philadelphia does not have an epidemic of cholera, it must be set down as an act of special Providence, exerted in favor of an undeserving subject.

Lafayette College, at Easton, Pa., has been closed ten days before the expiration of the term, on account of scarlet fever.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

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DIPHTHERIA.

WHEN one has used Marchand's peroxide of hydrogen in every case of diphtheria treated, for several years in succession, without ever witnessing any bad effect from the drug, it is difficult to resist the conviction that it is a harmless as well as most efficient local application. I have applied the full-strength solution to the nasal mucous membrane of children two years of age; and with excellent results. Diphtheria being an affection of remarkably rapid progression, the applications require to be made with great frequency. Once every ten minutes while awake, and at least every half hour when asleep, are the proper intervals, when the exudation is reproduced rapidly. With young children for whom my chlorine mixture cannot be employed in full strength, nothing answers so well as the peroxide.

When the exudation has disappeared finally, and the pharyngeal tissues are left in a congested state, the depletive properties of glycerine may be united to the germ-destroying peroxide, by the use of glycozone. This may be applied to the affected tissues by means of a brush, very frequently, as the act of swallowing is soon excited, and removes the glycozone; once every half-hour during waking is not too frequent.

Whenever the child's tissues will bear it, I continue to employ the nascent chlorine; believing that no agent is as destructive to the diphtheritic materies morbi: Indeed, in the families for whom I have prescribed this remedy during the last twenty years, the bottle is always kept filled; and I find, on making my first call for any throat affection, that they have not awaited my coming, but have commenced the use of the chlorine mixture as soon as throat symptoms manifested themselves. I doubt whether I should be obeyed, if I directed the substitution of any other remedy for a bad case of diphtheria, so strong is the faith of those who have employed this mixture in similar cases. The formula has been printed many times; but as THE TIMES AND REGISTER reaches hundreds of new readers every year, I will repeat it for the juniors' benefit:

℞. Potassii chloratis pulv. . . . . ʒj
Acid. hydrochloric, U. S. P. . ʒiss
Misce, et adde:
Tr. ferri chloridi . . . . . ʒij
Aquæ, q. s. ad. . . . . ʒiv
S.—A teaspoonful every two hours, undiluted.

It is generally necessary to explain to the pharmacist that you mean just what you say in this prescription, for he almost invariably concludes that you do not. First: The acid is *not* the dilute. I have had this prescription returned to me from Dakota, by a druggist who said I had forgotten to add the word dilute. It is the strong acid that is to be used, as the formula states. Second: The same gentleman will not mix the in-

gredients as directed, but dissolves the salt in the water, and then adds the acids, and then the gas is not liberated. If mixed as directed, the preparation will have the greenish color and the odor of chlorine, and that is just what we desire. Third: The enterprising pharmacist endeavors to correct another little inadvertence of the doctor, by slipping into the directions the advice to dilute the dose; thereby rendering it worthless. After many years of experiment, I have found that certain results are to be obtained from the mixture, if given in the strength advised; little or no results follow if the dose be diluted. In young children I apply it to the affected part with a brush or a swab.

Will my older readers bear with me if I briefly refer the newcomers to a few other points, many times told already?

The first appearance of coryza should be the signal for injecting the nostrils with a solution of silver nitrate, one per cent., or, as we used to say, five grains to the ounce. This, repeated at intervals of four hours, is almost certain to check the invasion of the nasal tract by the disease.

For epistaxis, inject with solution of chromic acid, one grain to the ounce, increased if this prove too weak. It is the only agent that has ever succeeded in stopping the hemorrhage, in my own experience.

Ice to the throat, sucked, and ice cream, are most valuable adjuvants. So are brandy, concentrated foods, fresh air, and, best of all, perfect cleanliness of house and premises, with the removal of all filth in the neighborhood. Isolation, disinfection of all articles handled, and burning of all discharges from the nose and throat, are among the first duties of the physician in charge of a case of diphtheria.

W. F. W.

NO POLITICS FOR THE NEW YORK ACADEMY OF MEDICINE; BUT JUST A LITTLE, YOU KNOW.

JUST now, as the time approaches for the meeting of the American Medical Association, and we are to have the *Code* question again dinned in our ears, and the medical politician, from his immaculate pedestal, laying down the law to us, it is interesting to watch which way the straws move on the surface, when questions involving polemics arise.

The New York Academy of Medicine has recently been the theatre of a very interesting and significant debate on the question of introducing politics into that august body. The question as we understand it was appointing a "committee in quarantine," from its membership, to co-operate with the city and state officials.

Dr Alfred L. Loomis, in a skillfully prepared and ably delivered speech, fiercely opposed admitting politics into the Academy. Dr. Derby regaled the attendance by reading a speech delivered by Dr. Lomis in 1881, in which he took a diametrically opposite position.

But, the political wing, came there to act and not to hear speeches; and the defeat of the eloquent late president of the Academy and his University backers was complete. The Post-Graduate School's president, now president of the Academy, and his new-code friends, "swept the decks," and opened the career of the new regime, by declaring that politics and medicine are not incompatible, but on the contrary both necessary and wholesome. So much for Roosa's first move. The importance of the action of the New York Academy of Medicine cannot be disguised or overlooked, for it means that the time has come when the medical profession must cast aside its former rather snobbish notion, that medical men must wall themselves off from the indus-

trial, commercial and political world and exist only in the dreamland of their own omnipotence.

Amen, we say then to Dr. Roosa, who, more than any other physician in America, has raised the standard and guarded the interests of medical men in New York state, by going to the legislature and wringing from politicians what he failed to accomplish through his fellow practitioners; a medical law, to the enormous advantage of legitimate medicine. Yes! We say, by all means let physicians wherever located take an active interest, and if necessary, an aggressive attitude, on all political questions which involve the public health, water supplies, quarantine, medical education and other public concerns which directly affect their own interests.

T. H. M.

NOTE.—The special number devoted to electrolysis is nearly ready, and will be issued on April 8. The numbers on Obstetrics and Gleet are well advanced, but not yet complete. We need for all these, *questions*, to be answered in the Bureau of Information, also, reports of unusual cases. We have also some excellent material for a special on whooping cough, and if our friends would send us enough to fill the number, it would be issued next.

Annotations.

ÆTHYL-ENDIAMIN.

ON March 10, I saw Florence P., at Lansdowne, taken ill that day. She had high fever, headache, and on each tonsil a whitish exudation. She was given an antipyretic powder every two hours, and her throat painted at the same intervals with the two per cent. cresol and æthyl-endiamin solution. In twenty-four hours every particle of the exudation had disappeared; the fever abated in another day, leaving congestion of the whole pharyngeal tract. This was treated with glycozone applied every two hours, and on March 15 she was about well.

Her sister Alice was seized with the same symptoms on March 11, and ran the same course.

On March 14, Mamie C. was seized in the same symptoms and recovered in five days, under the same treatment.

The exudation was white, not ashy; the tonsils and all surrounding tissues were intensely congested, the fever high, headache very great, the pulse full, strong, and somewhat irregular at the height. In two cases, the house was in bad condition, the cellar being very wet. In the third case, kresin was substituted for the cresol. The membrane disappeared under the applications with remarkable quickness, in fact, after the third painting there was hardly a trace remaining.

W. F. W.

The moral sense of the community will heartily approve Mr. Linden's crusade against the literature displayed on the newsdealers' stands. Judging by the suggestive titles and the lascivious illustrations on the covers, these publications should be taken up carefully with a pair of tongs, and dropped into the fiery furnace. Youth is prurient and old age sensual enough, without having such stuff thrust under the eyes of everyone who goes up to a stand to buy a newspaper.

The American Association for the Study and Cure of Inebriety, will hold a special meeting at the hall of the New York Academy of Medicine, No. 19 W. 43d Street, New York City, March 23, 1893, at 8 P. M. The subject for discussion will be "Specific Remedies for the Treatment and Cure of Alcoholic and Opium Inebriety." Short papers will be read by Dr. Norman Kerr of London, Drs. Kiernan, Clevenger, and Moyer, of Chicago, Dr. Hughes of St. Louis, Dr. Peterson and Clark Bell, Esq., of New York, Drs. Mason, Mattison, Mann, and Wood, of Brooklyn, Dr. Day of Boston, Dr. Crothers of Hartford, Dr. Russell of Winchendon, Mass., Dr. Quimby of Jersey City, and others. The profession are very cordially invited to be present.

T. D. CROTHERS, M. D., *Sec'y*.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,

TIMES AND REGISTER,

1725 ARCH STREET, - Philadelphia, Pa.

IN reply to yours of recent date, I hereby contribute my mite to the second number on diphtheria. Having passed through one epidemic of diphtheria, in which the town was almost depopulated of children, I will write from experience and observation rather than from theory.

First of all I do not agree with Strumpell that membranous croup and diphtheria are identical, neither do I believe with Osler and Vogel that the disease may be so mild as to need no treatment.

Believing that readers of THE TIMES AND REGISTER wish for diagnosis and treatment rather than clinical history, etiology, etc., I will at once give my views on differential diagnosis from membranous croup, the only disease with which it may be confounded.

First. Diphtheria is a *constitutional* disease, manifesting itself mostly in the throat; membranous croup is a *local* disease, never manifesting itself anywhere but in the throat.

Secondly. Diphtheria involves the lymphatic glands in the neck; membranous croup does not affect these glands.

Thirdly. Diphtheria is highly contagious and occurs mostly in epidemics; membranous croup is never contagious, and always sporadic.

Fourth. Diphtheria always has high fever at onset; membranous croup has little or no fever.

Fifth. Diphtheria may attack all ages alike; membranous croup always confined to children.

Sixth. The exudate in diphtheria is *in* the mucous membrane of the throat; the exudate in membranous croup is *on* the mucous membranes.

Seventh. The exudate in diphtheria causes necrosis or sloughing of the tissues, giving rise to a characteristic odor of the breath; the exudate of membranous croup does not cause sloughing, and has no characteristic odor.

Eighth. In diphtheria we have an albuminous urine; in membranous croup we do not.

CLINICAL HISTORY—Incubation very brief, may be a few hours; onset sudden; disease may begin with chill, but always with general malaise—headache, fever, temperature, 102° to 104°, accompanied by sore throat and difficulty in swallowing; on examination of throat we find redness and swelling; if first seen a few hours after attack, we find a few round or irregular white spots on the tonsils, and are able to detect a slight but characteristic odor to the breath—once fully identified, never afterwards to be mistaken. At this point there are five symptoms which I regard pathognomonic of diphtheria:

First. The great prostration of the patient.

Second. Inability to remove the exudate from the throat.

Third. Characteristic odor of the breath.

Fourth. Enlargement of lymphatic glands at angle of jaw.

Fifth. Albuminous urine.

Finding all of these symptoms present I pronounce the case diphtheria, but if they are not present, I claim it is not diphtheria.

Here is a disease where patients die in from ten to forty hours, and the treatment to be of any avail must be heroic. This is no place for the little pill man, with his statement that "it is the mild power which cures."

Similia Similibus Curantur. Bah! Here let the true physician stand forth, knowing the deadly power of the enemy he has to meet and likewise the power he has at his own command. Formerly ninety-five per cent. of true diphtheria cases were fatal; to-day we can save the lives of one-half our patients, if called in time.

TREATMENT. — Have your patient placed in the largest and lightest room in the house, one that can be properly ventilated and heated; insist that the air in

the room shall be kept fresh and moist, and temperature never above 65° or 70°, Take an ordinary test tube, in this place half a drachm of calomel, and stop the end with a perforated cork; using a spirit lamp, hold the tube at an angle, pointed toward the patient, and close enough to him so that he will breathe the fumes; sublime the calomel. Do this under a tent, made by the nurse holding a sheet over the patient. Do this every three hours, until respirations become easy. The relief to the patient is magical. There is no danger of salivating the patient, but the nurse sometimes suffers this affliction.

For the depression of the patient, give hypodermically every two or three hours $\frac{1}{100}$ grain strychnia, combined with $\frac{1}{20}$ to $\frac{1}{10}$ morphine, the latter to blunt the nerve centres and make them insensible to the septic and ptomaine poisoning of the disease. If the patient is able to swallow, give half an ounce of brandy; or better, one ounce of champagne every one or two hours. If possible, give oxygen by inhalation two to four minutes every two to four hours, according to cyanosis of patient.

Nourish per rectum until food can be given by mouth. Tracheotomy offers but little, for the patients die from the depressing effects of the disease rather than from the mechanical obstruction of the throat, but the operation ought always to be done if circumstances indicate and parents consent.

The mortality from this disease is frightful, its invasion sudden, and its course rapid, but from my experience and observation, I believe this course of treatment will save lives where milder treatment will fail.

D. J. Tillotson, M. D.

Corning, N. Y., February 16, 1893.

DIPHTHERIA, INTUBATION, RECOVERY.

Clark F., age 7½ years, exceedingly bright, intelligent boy, was first seen by me October 28th, complaining of severe headache, sore throat and general tired feeling. On inspection of throat both tonsils were enlarged, covered with small white spots, denoting typical follicular tonsillitis; temperature, 101½. October 29th, headache relieved, throat symptoms and temperature declining. October 30th, temperature normal, is sitting up in bed, convalescent, and discharged the case. Treatment: cracked ice, $\frac{1}{40}$ gr. hydrarg. biniodide every 2 hours, and brushing the throat frequently with peroxide of hydrogen.

Nov. 2nd, was called to treat the sister, age 9 years, with the same train of symptoms, except that both tonsils were covered with decided membranous patches, and also glandular involvement indicative of diphtheria. The children were isolated, health authorities notified, who came and took charge. The same treatment was administered to the girl; the recovery was rapid. The house was fumigated on the 7th. The girl regained her normal condition during the following week, and rejoined her class in school on the 14th. The boy remained languid, and while filling out the blank for the sister to re-enter her school, a messenger called me to see the boy again. I was told that on the evening of the 13th he expectorated suddenly a large quantity of thick, slimy, tenacious matter, and had noisy breathing during the night. The tonsils were now exceedingly large; almost meeting, slight exudation on both, temperature 101, no glandular involvement, apparently not very sick, remaining around the house among his playthings. The same treatment was again instituted, and recovery was rapid; temperature declined, tonsils becoming smaller, membranes disappeared, and dismissed the case on the 18th as convalescent.

On the evening of the 19th, I was again summoned to see him, when his mother told me he had a noisy and bad night; breathing was labored, noisy, voiceless, denoting an exudate in the larynx. On the 20th, the child took to bed, and all symptoms intensified; and at 4 P. M., my friend, Dr. Wm. M. Welch, was called in to see the case with me, and on close inspection, announced decided exudations low down on the posterior vault of the pharynx. Operative treatment was suggested and preparations made for same, should amelioration not take place soon. Tracheotomy was decided upon, but when asked, on the morning of the 21st, the family was not prepared to accept our decision and desired further time. At 3

P. M., I announced a fatal end soon; the child tossing around, extending its neck in vain to gain air; the clavicle, sternum, ribs, deeply retracted; is cyanotic; classical picture of asphyxiation; stimulants and emetics had been given, which are responding weakly. At 6 P.M., is easier; a draught of chocolate soda water caused free vomiting. At 10 P. M.; is sitting up in bed, giving directions to Kris Kingle, apparently well; breathing little noisy, but not labored. Continued in this condition until evening of 23rd, when dyspnœa again developed rapidly, did not want to be disturbed or take anything. At 11 P. M., all symptoms aggravated. Stimulants and emetics responded weakly and gave no relief. The family was now willing to have intubation done. At 5.30 A. M., the 24th, I was called; administered emetics, but there was no reaction; prays to be relieved, was choking. Fortunately my neighbor and friend, Dr. J. M. West, told me the day prior that he had a set of O'Dwyer's instruments, and was prepared to assist me at once. I called him at this last visit, and with very little trouble he introduced a tube. The child at once reacted completely, with the assistance of external warmth, etc. Feeding was somewhat difficult, liquids caused spasmodic coughing, no matter in whatever position the child was placed. Semi-solids were easily and eagerly taken; jellies, ice cream, minced raw oysters, milk toast, also nutritive enematas, milk and beef peptonoids were given.

At the end of twenty-four hours, in which period the child did elegantly, the boy plead appealingly to the kind mother for liquids, and she allowed him to drink through a small tube nearly one-half a glass of milk, when a short cough ejected the tube. The breathing was now fairly good, so we concluded, as we were near at hand, not to reintroduce it until absolutely necessary. I directed free stimulation and feeding, expecting another siege, and wishing to be as well prepared as possible. At 10½ P. M. breathing was quite difficult, and to a question of pain, he replied "I cannot get my breath." At 2 A. M. the child, of his own accord, asked the mother to send for the doctor and put the tube in his throat, as he could not get his breath. I at once called on Dr. West. The tube was quickly placed in position without any struggles from the child. From now on the child did well, and on the 29th the tube was easily removed and rapid convalescence took place, except loss of voice. The same difficulty existed in the second intubation in reference to swallowing liquids, semi-solids and soft foods being readily taken. A larger tube was inserted the second time.

My reasons for reporting this case are:

First. Doubts as to the specific character, diphtheria. While no efforts were made to isolate the Klebs-Loeffler bacillus, the appearance and re-appearance of membranous patches, and the history are, I think, sufficient evidence of specificity. At the first intubation both tonsils were *clean.* Twenty-four hours afterwards, a decided patch appeared, due to an abrasion in intubating. After the second intubation a large membrane formed on the tip of the tongue, through the same cause, evidently, and the large exudation deep in the fauces, with bleeding surfaces.

Second. The large quantity biniodide taken and no ptyalism; about eight grains during the period from 20th to 28th, $\frac{1}{40}$ gr. hourly.

Third. That types of this character where the whole force of the disease is expended in the larynx, with little systemic trouble, low temperature, little glandular involvement, are good cases for instrumental treatment.

I feel convinced our little patient would not have survived had we not intubated, and that many are left to chance and succumb, who would otherwise survive if intubated.

DR. JOHN M. WERT.
701 N. TWELFTH ST., PHILA.

P. S.—There was continually steam kept in the room saturated with turpentine and oil eucalyptus.

AN EXPERIENCE WITH DIPHTHERIA.

IN the summer of 1892 I had an experience with diphtheria which I believe to be worth relating, as it is one which gave me a great deal of anxiety at the time, and was more happy in its issue than was to be expected.

On the 27th of August I attended Mrs.

J. in labor, and of course attended her on in confinement. At my visit on the morning of the 30th my attention was called to her little son Walter, aged 3 years 4 months. The following was his condition: Pulse 120, temperature 99.2; bowels quite loose, vomiting and quite prostrate. His vomit consisted of greenish water. He complained of his throat, his right tonsil was rather swollen, and the glands of his neck rather large. No appearance of membrane. I gave him a lot of tablets, corrosive sublimate, gr. $\frac{1}{100}$, one every two hours. I also mixed one of the Phila. Dosimetric Company's tablets of Thymoline Comp., in water four ounces, for him to have a teaspoonful every half hour until his stomach settled, then every two hours.

At 6 P. M. the same day I found him: Pulse 132, temperature 103.5, lying drowsy all the time, and an erythematous appearance about the upper part of his chest. His throat about the same in appearance. I continued the corrosive sublimate and prescribed:

℞. Chloral. hydratis . . . . . gr. xxiv.
Syrupi lactucarii . . . . . ℥ ij.
M. Sig.—A teaspoonful in water *every two hours.*

My attention was now called to Edith, his sister, aged 5 years 9 months. Her condition was as follows: Pulse 132, temperature 101.5, tonsils greatly swollen and white membranous patches on each. She had been vomiting and complained of severe headache and pains in her limbs. I had isolated Walter in the morning, now I isolated her in another room, as there were both scarlatina and diphtheria in their street and I considered these a case of each. I gave her at once calomel gr. iv, and prescribed:

Potass. chlorat. . . . . ℥ ss
Acidi hydrochl. pur. . . . . gr. xlv
M. et adde.
Tinct. ferri chlor. . . . . ℥ j
Hydrarg. chlor. cor. . . . . gr. $\frac{1}{4}$
Syr. sarsaparillæ, q. s. ad. . . . ℥ ij.
M. Sig.—A teaspoonful every two hours. A drink of water before but none after.

Aug. 31, '92, 7.05 A. M., Walter's temperature was 101.7, and his pulse 144. Had slept right along. His throat, tongue and palate were quite scarlet, but a distinct white patch on his right tonsil. The suspicion of eruption was less distinct than the night before. He had no appetite and his bowels had not been moved since I first saw him. I gave him calomel gr. iv, continued the corrosive sublimate every two hours, and the chloral mixture every three hours.

Edith's pulse was 132 and temperature 100.1. Her throat looked rather freer and she had eaten a fair breakfast, but had vomited after each dose of medicine. Her bowels had moved twice. I continued the chlorine mixture but allowed water with it.

Aug. 31st, 6.40 P. M., Walter's pulse was 150, temperature 104.1, bowels not moved yet. No membrane on throat, been sleepy all day, nose occluded, urine free, neck much swollen. I gave him phenacetin, gr. ij. and left a powder of phenacetin, gr. ij. and strychnia arseniat. gr. $\frac{1}{134}$ for 9 P. M. At this time there was no appearance of eruption. I gave him calomel gr. iv, and prescribed:

℞. Potass. chlorat . . . . . ℥ ss
Tinct. myrrhæ . . . . . ℥ jss
Acid. carbolic . . . . . gtt ij
Mel. despumat . . . . . ℥ ij
Aquae dest *ad* . . . . . ℥ ij
M. Sig.—15 drops every half hour until bedtime, then half a teaspoonful every hour.

Edith's pulse was 132, temperature 104.2. Her throat had a better appearance, but she was quite delirious, and could not retain the medicine at all. Her bowels were quite loose. I gave her acetanilide, gr. iij., strychnia arseniat. gr. $\frac{1}{134}$, and left another powder of the same for 9 P. M. Ordered a triturate "Tonsillitis," Mulford & Co., every hour and gargling with pine-apple juice.

Sept. 1, 7.10 A. M., Walter's pulse 152, temperature 101.9. He was breathing more easily, and looked brighter. Slept fairly at night, ate some breakfast and bowels twice freely moved. Throat had a small patch on right tonsil. The external swelling was quite large. I mixed acetanilide gr. iv and strychnia sul. gr. $\frac{1}{60}$ in 3 powders, for one at once, the next at 1 P. M., and the last at 6 P. M. Continued the myrrh mixture, 15 drops every half hour, and a tablet of corrosive sublimate gr. $\frac{1}{100}$ every two hours, and ordered the throat atomized with:

℞. Acid. carbolic . . . . . gr. j
Liq. iod. comp. . . . . ♏ iv
Glycerini . . . . . ℥ j
Aquæ camph. *ad.* . . . . . ℥ j

Edith's pulse 136, temperature 101.7. She had a fair night but ate very little breakfast. She did not look very bright and her respiration was quite stertorous; nostrils occluded. Membrane on throat quite thin. I ordered the nostrils freely and frequently painted with a 5 per cent. solution of menthol in ol. amygdalæ dulc., continued the tonsillitis triturates every two hours, ordered atomizing frequently with the atomizing liquid given her brother, and the administering every half hour of 15 drops of the myrrh mixture given for Walter. I mixed acetanilide gr. viij, strych. sul. gr. $\frac{1}{60}$ in 3 powders, for one at once, the second at 1 P. M. and the last at 6 P. M.

Six P. M. Walter's pulse 144, temperature 103.9. Swelling of his neck appears to subside a little. He is somewhat brighter. Very little change in his throat, bowels moved once freely.

Edith's pulse 136, temperature 104°. She seemed utterly prostrate; vomited her 6 P. M. powder. She lay with eyes turned up, breathing with great difficulty, and very noisily. I gave her phenacetin gr. iv., calomel gr. iv., strychnia arseniate gr. $\frac{1}{134}$ and emetine $\frac{1}{67}$. Continued the drops every half hour. Ordered corrosive sublimate every hour and aconitine $\frac{1}{500}$, emetine $\frac{1}{67}$, strych. arseniat. $\frac{1}{137}$ every 2 hours, also spt. frumenti ʒ j, every 2 hours, the atomizing to be pushed, turpentine and lard to be freely applied to the neck, and turpentine ʒ ss, acid carbolic ʒ ss, in a quart of boiling water, to be kept steaming all the time in the room.

Ten P. M., Walter's pulse 144, temperature 102°.; he lay easy and seemed to be improving; continued treatment.

Edith's pulse 136, temperature 101.5. She seemed much the same, taking all her time to breathe and dropping to sleep as soon as left alone; continued treatment.

Sept. 2nd. 7.15 A. M., Walter's pulse 140, temperature 101.3. Condition much the same; membrane not much in the throat but no less than before; bowels not moved. I gave calomel gr. iv. and continued treatment.

Edith's pulse 144, temperature 101.9. She was reported to have breathed a little easier at times through the night, but did not at my visit. Membrane not covering the whole throat but nose full, and larynx evidently invaded. Bowels slightly moved. For the drops I substituted ʒ j of syrupi sanguinariæ acet. every half hour, to be given hot. This is made by macerating ʒ j rad. sanguinariæ canad. pulv. in a pint of equal parts of cider vinegar and water for 24 hours, then filtering and making into syrup with two pounds of sugar.

Five o'clock P. M., Walter's pulse 144, temperature 103·1. His throat was almost clear, but his nose was entirely occluded. He looked brighter. For the drops I substituted a teaspoonful of the acetic syrup of sanguinaria every hour, and continued the corrosive sublimate gr. $\frac{1}{100}$ every two hours and strychnine arseniate every three hours; urged the atomizing to be pushed.

Edith's pulse 144, temperature 103.7. She was breathing more easily, but still quite badly. Her nose was quite loose, and she was spitting out large pieces of membrane. Her father thought the hot sanguinaria syrup had done more good than anything else. Her eyes looked brighter. I continued all treatment, except that I substituted trinity granules for the aconitine, and added Colden's Liquid Beef Tonic.

Up to this time Mr. J., their father, had been nursing the children exclusively, as they had been unable to get anybody else, and had forbidden the obstetric nurse to go near them. On that morning, September 2nd, I found Mr. J. with his throat painful and red but not swollen nor coated at all. I ordered him to take the nascent chlorine mixture, that Edith had had to stop, in dessert-spoonful doses, also to atomize with the same mixture that they were using. Also mixed him a tablet thymoline comp. in O ss of water, for a tablespoonful every two or three hours.

Sept. 2d, 9.40 P. M., Walter's pulse 140, temperature 102.5; Condition much the same, treatment continued.

Edith's pulse 140, temperature 100.6. Her breathing was much worse. She sat up to get her breath, and went to sleep sitting up. Seemed to be weakening; I atomized her thoroughly, and got a lot of membrane and bloody muco-pus up. She was quite exhausted after it. Continued treatment, and ordered Colden's

liquid beef with each dose of medicine. Sept. 3d, 7.20 A. M., Walter's pulse 132, temperature 103. Seemed as usual. Right side of uvula covered with membrane. He had some appetite. Continued treatment.

Edith's pulse 132, temperature 101. She was counting her money when I arrived. Had more comfortable night. There was more space between her tonsils than there had been and she looked better I got up a lot more membrane. I allowed the syrup of sanguinaria ʒ ij every two hours, and continued the other treatment. Ordered ice cream, ad lib.

Mr. J.'s throat had a thin white patch on the right side, behind the tonsil. His bowels were free; atomizing continued.

℞. Tinct. ferri chl. . . . . ʒ iv
Potass. chlorat. . . . . ʒ ij
Glycerini . . . . . ℥ ss
Aquæ menth. pip. . . . . ʒ ij ss
M. Sig.—A dessertspoonful every 2 hours.

Sept. 3, 2.30 P. M., Walter's pulse 144, temp. 102¼ ; not much changed; bowels not moved. Gave him gr. iv calomel. Continued treatment, adding gtt. v, tinct. ferri chl. to each dose of syr. sanguinaria, and gave him one dose of phenacetin, ij, strychnia arseniat. gr. $\frac{1}{184}$.

Edith's pulse 136, temp. 102.5. Her throat was more open still, and her nose running freely. I gave her strychnia sulph. gr. $\frac{1}{60}$, and phenacetin gr. iij. and added gtt. x to each dose of her syrup of sanguinaria. Her bowels were free.

Nine P. M. Walter's pulse 132, temp. 102. He sweat very much in the afternoon, ate a good supper and spit out lots of membrane. Treatment continued.

Edith's pulse 140, temp. 101.5. Her breathing was rather better, but otherwise there was little change. She nibbled a bit at a cinnamon bun at supper time. I got up a large quantity of membranous detritus. Treatment continued.

Sept. 4, 7.30 A. M., Walter's pulse 120, temp 98.9. He looked quite bright, and ate anything he could get quite greedily, and from this on improved steadily, but the syrup of sanguinaria and iron and strychnia arseniat. gr. $\frac{1}{184}$ every two hours were continued well into convalescence.

Edith's pulse 120, temperature 99.6. Looked much brighter; her throat continued getting freer. Not much appetite, but a little. Continued sanguinaria and iron and strychnia arseniat. gr. $\frac{1}{184}$ every hour, and the atomizing freely.

Mr. J.'s throat not improving; bowels not free, so I gave him gr. vii calomel. Ordered gr. $\frac{1}{50}$ corrosive sublimate every hour, and prescribed :

℞. Tinct. ferri chl. . . . . ʒ iv
Potass. chlorat . . . . . ʒ ij
Acid. hydrochl. dil . . . . . ʒ j
Glycerini . . . . . ℥ j
Aquæ menth. pip. q. s. ad. . . . ʒ iij
M. Sig.—A dessertspoonful every 2 hours.

8.15 P. M., Edith's pulse 120, temperature 100.4. She was much improved and had a fair appetite. Had got out quite a cast of the upper part of the larynx apparently. I allowed of her not being disturbed at night after that, but to have medicine when she woke up.

Mr. J.'s pulse 108, temperature 101.6. Throat much the same, cervical glands quite enlarged. Ordered an onion poultice to his neck. I forgot to state that the children had had salt fat pork to their throats. I gave him two tablets acetanilide comp , and left him eight more to be taken, two every two hours I ordered him to take syrup sanguinaria acet. ʒ ij. and tinct. ferri chlor. m.x every two hours.

September 5th, 1892, 7 A. M. Edith's pulse 96, temperature 98. Still improving, though still lots of membrane showing behind her decreasing tonsils. Not much appetite. Continued treatment of the day before. Mr. J.'s pulse 72, temperature 98.7. Said his throat kept him awake all night, and membrane increasing. Continued sanguinaria and iron, and added strychnia sul. gr. 1-60 every three hours, and prescribed :

℞. Ol. eucalypti . . . . . ʒ i
Sodii benzoat . . . . . ʒ ss
Sodii bicarb . . . . . ʒ j
Glycerini . . . . . ʒ j
Aquæ calcis ad . . . . . ʒ viij
M. Sig.—Atomize for three minutes every half hour.

Since Mr. J. was taken sick the obstetric nurse had been doing the nursing for the sick, and Mrs. J. had been trying to take care of herself, so the contagium has been more or less brought to Nellie, another child aged eight years, and, at my morning visit, attention was called to her. Her pulse was 120, temperature 101°. Her right tonsil was enlarged and

there was a large membrane patch behind it. She complained of headache and pains in body and limbs. Ordered two acetanilid. comp. tablets every two hours, and syrup sanguinaria acet. ʒj every hour.

Sept. 6th, 7.50 A. M. Edith improved steadily from this on, and the treatment last stated was continued until the 9th inst., when she was well enough to do without.

Mr. J.'s pulse was 92. Temperature, 101.4. Right side of fauces and tonsil decidedly covered with membrane. Continued the atomizing, ordered calcii sulphid, gr. ss every half hour, and quininæ sulph gr. ij every two hours.

Nellie's pulse, 96. Temperature, 99.4. Felt first-rate, but the membrane just the same. I continued the sanguinaria, ordered gr. ss calcii sulphid. every half hour, and atomizing with the liquid prescribed for her father the day before.

Sept. 7th, 7.40 A. M. Mr. J.'s pulse, 72. Temperature, 99.5. The patches of membrane were much smaller. Bowels not moved yet, so I gave him gr. viij calomel. Continued the sanguinaria and the calcium sulphide, and ordered atomizing with hydrogen peroxide every hour. In the evening his pulse was 76 and temperature 100°. Throat not much different, though he felt rather better.

Nellie's morning pulse was 108, and temperature 99°, and she seemed all right except that there was a patch the size of a split pea on her throat behind the right tonsil. The treatment was continued. In the evening her pulse was at 132 and temperature 101°, but she did not appear any worse. I added strychnia arseniat. gr. $\frac{1}{134}$ every two hours.

Sept. 8. Morning. Mr. J.'s pulse, 72. Temperature, 98. Hardly any membrane on throat and feels much better. Continued treatment, except the atomizing with hydrogen peroxide, for which I substituted the solution of carbolated iodine in glycerine and camphor water, mentioned in the early part of this statement, which he claimed felt to him to have the best effect of any of the preparations for atomizing.

Nellie's pulse was 96 and temperature 98°, slept soundly all night, throat clean and she was apparently all right.

September 9th, 7 A. M. Mr. J.'s throat was clear and he was otherwise doing well, so that by September 11th he was fully convalescent.

Along with the rest, the mother, who was in the tenth day of her confinement, had two small patches of membrane on her fauces from the 6th of September, but her temperature did not get above 100.4, and the membrane was all gone on the 9th of September. Her only treatment was calcii sulphidi, gr.ss every half hour, and syrupi sanguinaria ʒij every two hours, and *gargling* with the carbolated iodine and camphor mixture. Edith's case was the worst I have ever seen to recover, and was certainly both nasal and laryngeal as well as faucial. Several of the remedies showed decided beneficial effects upon her but I think there is no doubt that the *syrup of sanguinaria, given hot*, gave her the most decided relief, though the emetine also did much towards loosening up the respiration.

My impression now is that the acetanilide was a mistake, and my experience since has led me to believe that hardly any possible degree of hyperpyrexia could induce me to give any to a diphtheritic patient. The addition to the other treatment of the strychnia very quickly showed its tonic effects, and was decidedly satisfactory. This article is different in style to most, I know, but it is a practical statement of the minutiæ of every-day attendance upon a series of serious cases, such as I should have particularly liked to find when I was just starting out in practice; so I have ventured to write it, hoping that it may be of benefit to some, who need to know a little more than they have yet had an opportunity to know, of the difficulties awaiting them in their chosen calling.

S. Cooke Ingraham, M. D.
No 113 Sumac St., Wissahickon, Phila.

ECHINACEA ANGUSTIFOLIA.

THE best remedy I have ever given for diphtheria is the specific tincture of echinacea angustifolia, given in full doses. Two years ago we had many cases in our little city of 15,000 souls, and many deaths. I treated thirteen cases and lost but one. Echinacea was my sheet anchor. Try it, and you will be pleased with the results.

A. L. Foreman, M. D.
Stockton, Cal.

THE SECTION ON THERAPEUTICS OF THE PAN-AMERICAN MEDICAL CONGRESS.

WILL you kindly state in the columns of your esteemed journal, that it is the earnest desire of the officers of the the section on Therapeutics of the Pan American Medical Congress, that both specialists and general practitioners should contribute articles to its proceedings.

Gentlemen who desire to read papers at this meeting should notify the undersigned at once of their intention, and should send him, by July 10th at the latest, an abstract of their paper in order that it may be translated into the three official languages of the Congress and published in the programme. The importance of this section, and the interesting papers which have already been promised, give assurance of a very successful meeting.

H. A. HARE,
President of Section.

The Medical Digest.

TREATMENT OF DIPHTHERIA.

WHILE laying stress upon the fact that hydrogen peroxide is not a specific, I *do* claim that it accomplished the most good, and at the same time has absolutely *no* objectionable qualities, which latter remark is applicable to very few germicides. I most heartily endorse the statements as to its advantages as made by Dr. Bloodworth, of Philadelphia, namely, that it checks the growth and increase of the bacilli, and is "non-irritant, colorless, odorless, tasteless, and causes no pain." I also believe with Dr. Greig, of Toronto, that it prevents the production and absorption of the poison, "and it has the property of oxidizing many organic compounds;" also that it undoubtedly acts as a solvent upon the membrane.

The plan that I have found most satisfactory for the application of these agents is: First, spray the throat with the hydrogen peroxide; this is to be followed in one hour by the application of a 5 per cent. solution of oleate of mercury—the application being made with a camel's hair pencil. This plan is continued throughout the entire course of the disease—the hydrogen peroxide being alternated every hour with the oleate of mercury.

While oleate of mercury possesses many of the properties for which we should use the bichloride, it is not irritant like the latter, and is practically harmless when used in the strength above mentioned.

As to the internal administration of remedies, the practitioner must be guided by circumstances and his own good judgment. With the exception of stimulants, there are *no* medicines that I would particularly recommend for internal administration. While iron, so extensively used at present, may be of benefit, I fail to see the indications for its use, and have but little faith in its reputed worth.

The careful support of the patient's strength by the judicious administration of liquid food is as indispensable to the successful results as is any part of the treatment. Our most valuable ally in this line is milk. If the child rejects food and offers forcible resistance to its administration, then it must be nourished per rectum.

When the pseudo-membrane has extended to the nares, we have to cope with the disease under more difficult conditions. In this situation, owing to the greater extent of mucous surface exposed, there is a more extensive field for the absorption of the poison. Under these conditions it is very necessary to keep the passages clean and thus prevent, as far as possible, the absorption of the poison. For this purpose, Loomis recommends the nasal douche, with a fountain syringe, using a one per cent. solution of carbolic acid.—Hazen, *Va. Med. Monthly*.

Scheiller says men are not men until they reach the age of twenty-eight years. A remedy is needed that will hold in check the functions of manhood until that age has been reached. Thus far our resources are abstinence from alcohol and albuminous food, vigorous work for the body and mind, and cleanliness in body and mind; clean reading, clean conversation and clean thought.

The Times and Register.

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A NEW TREATMENT FOR PERTUSSIS.

By SIDNEY B. STRALEY.

ALONG the roadsides and in deserted fields, often even creeping into the silent "cities of the dead" grows from the shores of Maine to the southern boundary of Pennsylvania a little modest plant, unknown to many, yet destined, perhaps, to be sought after by thousands whose little ones need help, and rescue from the sufferings of pertussis.

The plant is a foreigner, coming to us from Europe and Southern Asia, but it has become naturalized in the section above named. The plant is suffruticose, prostrate, leaves from five to ten mm. long, flat, petiolated, ovate or roundish-lanciolate, entire, ciliate at the bases, smooth except for glands which occur on both sides. The flowers are purplish, situated on the ends of the branches, and have four stamens usually included. It chooses rocky or sandy locations by preference, where the soil is thin and uncultivated. The laity in Sussex County have long used a tea made from the green plant as a blood purifier during the spring months, and no cases of injury have ever resulted from its excessive use. This little obscure plant, named thymus serpyllum, has proven a specific to one of the most distressing diseases of childhood and infancy, namely, pertussis. In a paper earlier in the year,* reports of five typical cases were given, in which the thymus serpyllum was administered in the different stages of the disease, and with the single result of a cure in every case in five days. These cases occurred early in the spring of the present year, and since then the further use of the remedy has only confirmed the hopes which were at first entertained. In over a dozen cases treated, the disease was under control in two or three days and checked entirely in five days.

The profession in Sussex, at my request, has given the thymus a trial; and those who have reported have strengthened the proof of the specific power of the drug.

Dr. L. D. Miller, of Newton, N. J., reports three cases in one family, where he used the tincture made from the green plant, and found on his second visit the children so much improved that he made no further visits. In two other cases in his practice the tincture cut short the disease in five days. The dose of the green tincture for a child of eight years is from xx to xxx ♏. Dr. Miller, in reporting these cases, expressed his surprise at the quick and complete action of the remedy, saying he "would not have believed it possible to have such prompt action.

While the period of incubation and of cure is five days, yet it is advisable to continue the treatment for a few days

*Thymus Serpyllum in the treatment of Pertussis. Trans. of N. J. State Med. Soc., 1892.

after all the symptoms have subsided. The medicine has undoubtedly a specific action even more pronounced than quinia has in malaria, for in no subsequent cold following this treatment of pertussis, do we have whooping. The germ is utterly and totally destroyed, but whether the patient is susceptible to a subsequent attack my experience has been too limited to prove.

It may be possible that the thymol in the thymus has the specific action. The busy life of a country practitioner forbids extended experiments, but whatever principle produces the result, it is a deadly enemy to the pertussis germ, and will destroy it in any and every stage of the disease with equal facility.

While pertussis is in a strict sense not a fatal disease, yet thousands die annually from its ravages, and there has been no reliable remedy with which we could hope to battle successfully against the disease. It is with the greatest pleasure, therefore, that the author offers to the profession this specific, which his own trials, together with those of his colleagues of the Sussex Co. Medical Society, has proved to be the weapon royal with which to quiet and cure pertussis. H. O. Ryerson, druggist, of Newton, N. J., is the only source known to the writer where the tincture can be obtained pure and made from the fresh green plant.

In giving this remedy to the profession, do not understand it to be a specific for the complications of pertussis; it will only cure the original disease, but does lessen the chances of complications by its quick action.

Whether the pertussis will return if the patient subsequently runs the chance of infection, cannot now be definitely stated. The short time the thymus has been used would necessarily exclude proofs of this.

In experiments with this drug, dram doses have been given with no ill effect, except an occasional laxative discharge from the bowels. It has a sedative action on the nerves and stimulates the gastric functions, increasing the appetite and the digestive power of the stomach.

We, then, may conclude from the above:

First. Thymus serpyllum is a specific for pertussis.

Second. It acts in any stage of the disease.

Third. It also is a nerve sedative and gastric stimulant.

Fourth. It is necessary to use the green plant.

Fifth. It is perfectly harmless in doses as large as a teaspoonful of the tincture for a child of eight years.

Sixth. The action is fully established in twenty-four hours and completed in five days.

Seventh and lastly: indications are that there will be no recurrence subsequently, at least not more often than in cases which run the full course.

ANDOVER, N. J.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,
TIMES AND REGISTER,
1725 ARCH STREET, - Philadelphia, Pa.

MEDICAL MATTERS IN READING.

THE Berks' County Medical Society held its monthly meeting, March 14th; it being a business meeting.

Dr. Weidman gave an address on the advantages of the medical examiner's bill, now before the houses of our State Legislature, and asked the members of the society to use their influence among members of the legislature, and get them to support the bill. The milk bill, as presented by some members of the legislature from Philadelphia, was not discussed, but laid on the table for next meeting, or possibly for an extra or special meeting which may be called.

Delegates were appointed to represent the society at the meeting of the State Medical Society at Williamsport, in May.

Delegates appointed were: Drs. Geo. Shenk, Daniel Longaker, S. C. Ermentrout, F. W. Frankhauser, James S. Keiser, S. L. Kurtz, D. B. Beaver, Dr. J. Potteiger of Hamburg and M. L. Bertolet of St. Lawrence.

SMALLPOX IN READING.—Reading is at present on the verge of a smallpox epi-

demic, thirty-seven cases having been reported.

It appears smallpox has been in Reading since February 2nd, but was not reported for over two weeks; in the meantime, the family was not quarantined until several families became afflicted. The Board of Health is about bringing suit against the doctor who did not report the case or cases properly. The Board of Health is doing all that is in its power to prevent the spreading of the disease; watchmen are being appointed to guard each house. All persons are requested to be vaccinated, ward physicians have been appointed to vaccinate the poor, the Board furnishing the virus, and paying twenty-five cents for each one that takes. The Board of School Controllers has ordered all children to be vaccinated. Business houses have requested their employees to be vaccinated. The Board of Health is about building a hospital for the treatment of smallpox.

The Reading and St. Joseph's Hospitals are vaccinating the poor free of charge, and all that can be done to isolate and quarantine the cases is being done.

Smallpox has existed all winter in the vicinity of Reading; the Board of Health has been trying to exercise its authority for five miles outside of the city limits, but, through somebody's carelessness, the disease has reached the city, and what the result will be no one can tell; but in the last few days a number of new cases have been reported.

Cases of skin disease of an eruptive character need to be very careful or they will find themselves in the hospital for smallpox. It has already been rumored that a bad case of *itch* had been reported and hurried to the Berks County almshouse, to be treated for smallpox. What next, no one knows, as one case of urticaria was also sent home from one of our large cigar factories, thinking it might be the dreaded disease.

The general health of the city is good.

F. W. FRANKHAUSER, M. D.

230 SOUTH SIXTH STREET.

CORRECTION.

IN the issue of January 11th, you made some statements as to the *cost* of the Y. M. C. A. rooms in our college that place us in a wrong light.

First, Mr. Woodruff *stated*, so he writes me at least, that we desired to raise $1000. The room has cost, in round numbers, $600.

The students have raised and paid $200. We only ask the alumni to do as we have done.

Hoping you will make the correction, I am, Yours respectfully,

B. F. BRUBAKER,

Chairman of the Y. M. C. A. Building Committee.

[The statements referred to are in the report of the Alumni Association, and were printed as furnished to us by the Secretary.—ED. T. & R.]

HOW MUCH KEROSENE CAN A CHILD SWALLOW WITHOUT INJURY.

I HAVE just read in THE TIMES AND REGISTER of a child who drank about two ounces of kerosene oil; which reminds me of a case occurring in my practice. In this case the child, a little girl of two years, swallowed at least an ounce each of kerosene and turpentine mixed. I did nothing at all, but told the mother to watch and wait for the poisonous symptoms which might follow. To my great surprise no bad symptoms followed this huge dose; and the child did not seem to suffer any inconvenience whatever from it.

J. C. MCMILLAN.

MARION, S. C.

The Managers of the Seaside House for Invalid Women desire to invite the attention of clergymen and physicians to the advantages offered by the Mercer Memorial House, Atlantic City, to sick or overworked women, who need, and yet can ill-afford, a sojourn at the seashore. In it, a comfortably furnished private room, with board, nursing, medical treatment, and medicines, can be had for Four Dollars per week, or about one-half the actual cost. Circulars can be had by writing for them to the Mercer Memorial House, Ohio and Pacific Avenues, Atlantic City, N. J. No one is ever admitted without previous application. The house will be open in 1893, from March 23d, to about October 1st.

Board of Managers: President, William H. Bennett, M. D., 332 S. Fifteenth Street; Secretary, Miss Lilla S. Pechin, 243 S. Thirteenth Street; Treasurer, Frank K. Hipple, 1340 Chestnut Street.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
MANAGING EDITOR.

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MORE MILK LEGISLATION.

THE Markley milk bill is dead, but two new bills relating to cattle and their products have been introduced in the Pennsylvania legislature. One of these provides that an act passed in 1885, shall be so amended as to apply to the state generally. The official title of this measure is "*An Act to prevent the adulteration of, and the traffic in, impure and unwholesome milk, in cities of the second and third classes.*" The object expressed is most laudable; one with which every right minded citizen will most heartily sympathize; and if the provisions of the bill be such as its title would indicate, we would urge its passage. We will give the bill in full, and our readers may judge for themselves.

Section 1. "In cities of the second and third classes, whoever by himself or by his servant or agent, or as the servant or agent of any other person, sells, exchanges or delivers, or has in his custody or possession with intent to sell or exchange, or exposes or offers for sale or exchange, adulterated milk, or milk to which water or any foreign substance has been added, or milk produced from cows fed upon any substance in a state of putrefaction, or from sick or diseased cows, shall, for such offense, be punished by a fine of not less than twenty, nor more than one hundred dollars."

To this we say, Amen. Excepting the absence of any clause respecting guilty knowledge, no possible objection can be made to it by any one who has the public interest at heart. It entails on the milk dealer an amount of care that he ought to take, for his own interests as well as the welfare of his customers.

Section 2. "Whoever, by himself or by his servant or agent or as the servant or agent of any other person, sells, exchanges or delivers, or has in his custody or possession, with intent to sell or exchange, or exposes or offers for sale as pure milk, any milk from which the cream or any part thereof has been removed shall, for such offense, be punished by the penalty provided in the preceding section."

The objection to this section is in the use of the word "pure," where it is evident that "whole" or "entire" milk is meant. As it stands, this section might readily be construed as forbidding the sale of skim milk or buttermilk; as both may be termed "pure" milk.

Section 3. "No dealer in milk and no servant or agent of such a dealer, shall sell, exchange or deliver, or have in his custody or possession, with intent to sell, exchange or deliver, milk from which the cream or any part thereof has been removed, unless in a conspicuous place above the center upon the outside of every vessel, can, or package, from or in which such milk is sold the words 'skimmed milk' are distinctly painted in letters not less than one inch in length. Whoever violates the provisions of this

section shall, for such offense, be punished by the penalty provided in section one of this act."

Section 4. "If the milk mentioned in sections one and two of this act is shown, upon analysis, to contain more than eighty-seven and fifty one-hundredths per centum of watery fluid, and to contain less than twelve and fifty one-hundredths per centum of milk solids, and less fats than three per centum, and if the specific gravity at sixty degrees Fahrenheit, is not between one and twenty-nine one-thousandths to one and thirty-three one-thousandths, it shall be deemed to be adulterated."

This section could only have been elaborated by a person little familiar with the subject, for a milk of the proportions specified by these provisions does not exist. According to Hehner and Richmond a milk containing twelve and and one-half per cent. total solids, with three per cent. fat, will have a specific gravity of 1.035½. While there is a slight variability, it is insufficient to bring the specific gravity down to 1.033. To do this a much larger per cent. of fat and a lower per cent. of other solids is requisite. The section, therefore, as given, would allow such a limited amount of milk through the net, that it really legislates the milk business out of existence.

Section 5. "If the skimmed milk mentioned in section three of this act, is shown, upon analysis, to contain less than six per centum of cream by volume, and less than two and one-half per centum of fat by weight, and if the specific gravity at 60° Fahr., is not between 1.032 to 1.037, it shall be deemed to be adulterated."

This forbids the taking of more than one-sixth the cream or fat from milk, leaving five-sixths in the skim. Such a regulation is simply preposterous. It would not be worth while to skim milk at all, in this way; and the provision is only another indirect attempt to prohibit entirely the sale of skim milk. For a diet in Bright's disease, and other affections for which skim milk is prescribed, such an article would be totally unsuited.

Section 6. "Whenever the inspector of milk has reasons to believe that any milk found by him is adulterated, he shall take specimens thereof, and test the same with such instrument or instruments as are used for such purpose, and if the result of such test indicates that the milk has been adulterated or deprived of its cream, or any part thereof, the same shall be *prima facie* evidence of such adulteration in prosecution under this act. If the said inspector shall deem it necessary he shall cause such milk to be analyzed, the result of which analysis he shall record and keep as evidence, and a certificate of such result sworn to by the analyzer shall be admissible in evidence in prosecution under this act. The expenses of such analysis, not exceeding fifteen dollars in any one case, may be included in the costs of such prosecutions."

This makes the lactometer, the instrument to which the section refers, the sole authority, its evidence being made "*prima facie*" at the discretion of the inspector. No one familiar with this and other instruments for testing milk, considers them absolute or reliable. Milk of undoubted purity may be condemned, and really adulterated milk approved, by the lactometer test. The objections to placing such reliance on instrumental tests of such a character is apparent on referring to the two remaining sections.

Section 7. "It shall be the duty of the inspector of milk to commence proceedings in the name of the Board of Health for any violations of the provisions of this act, from his own knowledge or on information of any person giving satisfactory evidence to him of such viola-

tions, before any mayor, deputy-mayor or alderman of said cities.

"The recovery of fines or penalties imposed and inflicted on any person by the provisions of this act, shall be for the use of said board of health, and upon non-payment of the fines or penalties imposed and inflicted as aforesaid, such person shall be committed to the county jail for a period not exceeding thirty days."

Section 8. "That in addition to the fines mentioned in the foregoing sections of this act, any person or persons violating the same shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be liable to a fine of not less than fifty, nor more than one hundred dollars, or by imprisonment in the county jail for not less than ten, nor more than thirty days, or both or either at the discretion of the court."

The same objection applies to the last section as to the Markley bill, in that it provides criminal punishment for selling milk that is only technically "impure or adulterated." There is a misuse of these terms throughout both acts, that ought not to be allowed. Milk prohibited by the law because not of the legal standard is not, therefore, either inpure or adulterated. It looks like a trick, to catch the support of the unthinking class, who are apt to seize on these words, without closer examination. A perfectly pure and wholesome milk, by this act may become legally "impure and adulterated."

In another department we give the text of the other bill, entitled: "*An Act to prevent the spread of tuberculosis among domestic animals.*"

In this bill there are several praiseworthy features: It does not create a horde of inspectors, responsible to the Lord knows who, empowered to roam about the State, confiscating cattle and dealing out fines and imprisonment at their own sweet will, but places the whole matter where it properly belongs: under the control of the Bureau of Agriculture; a department of the State Government already established, and that has won the confidence of the public by its good work. To this Bureau is given full power to eradicate tuberculosis from the cattle in the state, and to punish wilful violations of the act, after conviction by due process of law. The eradication of tuberculosis requires the proper care, housing and feeding of cattle, and thus the proposed act accomplishes nearly all the good sought by the cumbrous and oppressive methods of the Markley bill. Judiciously enforced, it reduces the dangers of milk to the wilful adulterations; and these can be best prevented by municipal ordinances.

INTESTINAL ANTISEPSIS IN PNEUMONIA.

CROMBIE (*Ind. Med. Gazette*) recommends calcium chloride for pneumonia. He gives five to fifteen grains every four hours. He gives a list of twenty-two cases that ran a singularly mild course on this treatment. He also states that this salt puts an end to crops of hot-weather boils more surely than the sulphide.

There was in several cases a distinct extension of the pneumonic process to the other lung, while the patient was under the influence of the calcium salt, with recrudescence of the fever. He explains his success by the theory that as peptonuria is constant in pneumonia, the calcium may neutralize the toxic action of the peptones or albumoses circulating in the blood. But as this was insufficient to prevent the spread of pneumonia through the pulmonary tract, it appears more likely that the favorable results were due to intestinal antisepsis. This is in harmony with observations made by American physicians on the sulphocarbolate of zinc in pneumonia; the results

obtained being similar to those recorded by Crombie. It seems probable that, in the near future, it will be shown that in all essential fevers, when the normal secretion of the digestive ferments is interfered with, toxines develop in the intestinal canal whose absorption affects the body injuriously and renders the disease more serious. Evidence accumulates as to the value of intestinal antisepsis in all continued fevers; and the superiority of the sulphocarbolate over all other antiseptics for this use.

THE FAMILY PHYSICIAN COMPANY, LIMITED.

IN the universal condemnation poured out upon the Cincinnati scheme for supplying medical attendance at wholesale rates, one aspect of the question seems to have been overlooked. How does the scheme appear to the patient?

Cincinnati is an old city, and very poor. Its trade has drifted away to Louisville, St. Louis and Cincinnati. The growth of the great western cities has reduced the Ohio metropolis to a local center, and the conditions of life there are hard; even harder than in Philadelphia. How many Cincinnati firms advertise in the medical journals as compared with the cities named? She has an excellent weekly medical journal, well edited, its pages filled with material equal to any of the Eastern weeklies, worthily representing the profession of the Ohio valley. To the last number of this journal its native city contributes three advertisements: half a page each, for a medical college and a beer brewer, and a quarter page for a private hospital! If Cincinnati has any manufacturers or drug firms they ought to be ashamed of themselves. This is an unerring indication of the decay due to a lack of business energies, as well as to her unfortunate location, too far East and not far enough West. It is certain that the effects of this condition of affairs are felt by all classes, and it is not, therefore, surprising that in Cincinnati there should arise a scheme for reducing the cost of illness to a fixed and minimum amount. And, however much the profession may declaim against it, the necessities that led to such a plan being devised will lead to its adoption. Like the Provident Dispensary in London, if the plan be in harmony with the needs of a time when pennies *must* be counted, it will force its way into favor.

Annotations.

A CONTRIBUTION TO THE STUDY OF BRONCHIAL FISTULÆ.

FISTULAS of Brochdalek's Canal.—In the *Revue Medicale De La Suisse Romande*, Dr. F. Buscarlet contributes a valuable article on the above named subject. He divides bronchial cysts or bronchial fistulæ, from an anatomical standpoint into—

1st. *Pre-hyoidean*, those which are most superficial, as those in the mylo-hyoid muscle, consequently subcutaneous.

2d. *Supra-Hyoid.* Those which are lodged between the sheaths of the genio-hyoidian muscles.

3d. *Epi-Hyoid.* Those between the genio-hyo-glossus and other circumjacent muscles.

4th. *Intra-Hyoid.* Those in the concavity of the hyoid bone.

He remarks with Lannelongue that many of those which seemed but subcutaneous are deeply lodged. The structure of the congenital cysts, he maintains is *dermoid* and *mucoid.* In twenty-four cases out of twenty-seven which he examined, cerebral substance was found in the debris of the cysts. On histological examination pavement and stratified epithelium was found; seven times hair; exceptionally glands and papillæ.

In the clinical study it is noted that they have been met with from birth up to sixty-seven years of age, rather more frequently in the male than the female. The most frequent site in the mouth is buccal or sublingual. When very vol-

uminous they may interfere with speech and deglutition. Luther's case is cited, in which one of those cystic tumors was opened which was lodged between the genio-glossus and adherent to the hyoid bone. In its contents sebaceous glands, hair and epithelium. Gruber, Gross and Marchand's remarkable cases are mentioned, in which the canals of the cysts were found to pursue a deep and most tortuous course on dissection.

Thyro-hyoid fistulæ are situated below the larynx and are attached to the hyoid bone, sometimes to the side of the mouth or the pharynx. Boyer met with one of these malformations, which opened between the thyro-hyoid muscle and membrane, and was quite interminable in its course. Malgaigne regarded these cysts as hygromas, Broca the elder regarded them of a pathogenic origin, arising from an in-growth and dilatation of a mucous follicle.

Although these defects are not noticeable until adult years are reached, there is no doubt but they are all of embryonic origin. In many of them, after being open, they resist the strongest irritants and fail to permanently cicatrize. The movement of the larynx in respiration, speech and swallowing, interferes with their obliteration. The morbid anatomy and the pathological ground-work of these formations is an embryonic derivation of the tissue elements, in the evolution of the buccal and laryngeal organ. The pathogeny of them, the dermoid and mucoid alike may be traced to vice of evolution in embryonic lip, an arrest of, or disordered development. Treatment must be based on a precise knowledge of their structure and relations. The older plan of injecting these fistulæ must be discarded, because there is danger of septic infection, and besides it is very painful.

Hence the proper course to pursue, is to dissect them out and solidly close them from their base. But we must bear in mind that as they extend into the deeper parts, they often have many tributary branches, which must be completely destroyed or else there will be relapses. A most fruitful source of relapse in all cases is the neglect to enucleate these minute diverticula.

The author's conclusions are that there exist congenital median or lateral fistulæ on the neck in the super thyroid and the thyro-hyoid regions. These fistulæ may never be preceded by the presence of a cyst, in which case they are not consecutive but primitive.

Their lamina are always of very small calibre, tortuous, present many diverticula and sinuses, and are lined by ciliated, cylindrical and stratified epithelium. The peculiarity or characteristic of these fistulæ is that they are very rebellious to treatment; their numerous diverticula, their depth, always necessitates an extended and complete dissection.

T. H. M.

BIBLE LEPROSY.

MINJ says that the Ezraic description of leprosy in Leviticus xiii, does not correspond with any form of the disease to-day, but does answer to a Turkestan skin disease, known there as *pes*. He also calls attention to the fact that the isolation of lepers was not hygienic but religious, as they were unclean, to Jews, but not to Gentiles, according to the Mishna. In Turkestan, those affected with *pes* are abhorred even by the true lepers. He says there is no evidence of leprosy existing in Egypt at the time of the Hebraic captivity, though Lucretius says it existed there in the century preceding the Christian era. In Leviticus the term leprosy seems to have been applied to any spreading skin disease, psoriasis, sycosis or impetigo, as well as to mould on the walls and garments.

In one particular Minj is probably mistaken, as Manetho attributes the Exodus itself to the expulsion of the lepers from Egypt.

EFFECT OF PURGATIVES ON SUCKLINGS.

IN the *Practitioner*, for March, Gow contributes some observations on the effect on sucklings of purgatives given to the mother. The drugs were given for a week, and pains taken to exclude accidental causes of fallacy. Senna, in compound licorice powder and in confection, was given to eleven cases, with no effect on the children, except that one was "less costive."

Ten cases were treated with aloes, Barbadoes, two and one-half to five grains daily. In eight, there was no effect; in one, the child became more costive, and in one, the bowels acted twice a day, instead of once, as previously.

Cascara sagrada was given to ten cases; of which eight cases were unaffected, one less and one more costive.

Eleven cases were treated with sulphate of magnesia. In five, the children's bowels were unaffected, in five they were looser, and in one more costive.

There was no relation between the action on the mother and that on the child, except with the magnesia, and here, in four cases, free action on the mother coincided with some action on the child; while in the case where the mother was most affected the child was unaffected.

BACTERIOLOGICAL STUDY OF CHOLERA IN FRANCE.

IN the *Révue Generale de Medicine de Chirurgie et d Obstetrique*, Feb. 22nd, '93, there appears a highly interesting and valuable contribution on the subject of cholera, by M M. Lesage and Macaigne, entitled "Etude Bacteriologique du Cholera observe á la Hopital St. Antoine, in 1892."

The observations on which their brochure is based, were made in Pasteur's laboratory in Paris. They say: "During the last epidemic of cholera, which invaded Paris and its environs, 250 cholera patients were admitted into the hospital of St. Anthony in the service of M. Hayem. We studied these cases, chiefly from a bacteriological point of view, and here submit our conclusions:

1st. There were many microbian varieties of cholera seen, in which it was impossible to distinguish clinically: (*a*) cholera bacillus-comma; (*b*) the cholera bacillus coli, and (*c*) the poly-bacillian without the comma-bacillus.

2nd. In the first variety (*a*), the comma-bacillus was never found pure.

3rd. A certain number of cases might be defined as cholera from bacillus coli.

4th. There was no relation between the number of the comma-bacilli and the gravity of the disease, as a simple diarrhœa might contain an abundant crop of the comma-bacilli.

5th. Varying shades of mildness and gravity were observed in mixed, as well as the pure cultures. The presence of the comma-bacillus was invariable in mortal cases.

6th. Cadaveric rigidity, in all mortal cases alike, set in during the first few hours after death.—(*Cholera Algide.*)

7th. Choleric reaction seems to be a secondary infection from the bacilli-coli, as their presence was proved in nearly all the organs after death. T. H. M.

Book Notices.

OPHTHALMIC CASE BOOK. By L. Webster Fox, M. D., and E. E. Holt, M. D. Sixth edition. 250 pages, Published by John L. Borsch & Co., Opticians, Philadelphia, Pa.

The demand for this case book has been a growing one, as it has gone through five editions in a comparatively short time. The details of the book are well carried out. The busy ophthalmic surgeon will save much time by using it. It is printed on good paper and well indexed.

THE MEDICAL ANNUAL AND PRACTITIONER'S INDEX. A work of reference for medical practitioners. 1893. Eleventh year. English Publishers, John Wright & Co., Bristol. American Publishers, E. B. Treat, New York. Cloth, 8 vo pp., 800. Price, $2.75.

This volume is designed to give a concise outline of the year's work in practical therapeutics. An enormous amount of labor is entailed by the effort to sift the vast mass of medical literature and retain the really new and useful matter. While it would be easy to point out errors, of omission and of commission, we feel tempted rather to congratulate the publishers that the work has been done so well. Altogether, it is one of the books that every busy physician must have.

The titles of papers for the Section of General Medicine of the Pan-American Medical Congress should be sent at once to the secretary, Dr. Judson Daland, No. 319 South 18th Street, Philadelphia, Pa. For the Section on Dermatology and Syphilography titles should be sent to Dr. W. S. Gottheil, 25 West 53d Street, New York City.

News and Miscellany.

Carbonic acid checks fermentation of milk.

Spitzbergen water has no bacilli or pathogenic micro-organisms whatever.

The Professor Virchow now visiting in this country is the son of the great cellular pathologist of Berlin.

The Indiana State Board of Health has ordered all cities and towns to clean their streets and alleys at once.

Dr. S. V. Clevenger has received his appointment as Superintendent of the Kankakee Insane Asylum.

A bill now before the Pennsylvania Legislature gives boroughs the right to appoint local boards of health.

Mr. Ernest Hart has done a public service by demolishing the pretensions of the Luys school of hypnotism.

It is said there is a great demand for competent Democratic doctors in Illinois, to fill offices at the disposal of the Governor.

The town of Isabel, Illinois, is suffering from an epidemic of measles, introduced by an undertaker, who brought a body there for burial.

A London medical student was seized with smallpox; and while the authorities were squirming to avoid taking the the case, he poisoned himself.

The Liège medical students have formed a society to visit patients discharged from hospitals, and supply food and other necessaries during convalescence.

While Dr. A. J. Baxter, of Chicago, was intervening between a woman and a crowd of toughs, one of them relieved the doctor of a $1200 diamond stud.

Chicago has just completed a new garbage crematory; and the last analyses of her drinking water show it to be remarkably pure. New York papers please copy.

Pick has found that wine added to water lessens the risk of infection by cholera or typhoid bacilli. The mixture should be made twenty-four hours before use, and drank from the original vessels.

Through the kindness of Messrs. P. Blakiston, Son & Co., we have received a number of copies of Sir Morell Mackenzie's pamphlet on Diphtheria, which will be sent to our subscribers, free, on application.

A young woman, apparently drowned, was fished out of an English river by a man. Animation was restored for a few hours; and this bilked the rescuer out of his fee, as it is only paid for recovering a dead body! Fine arrangement, that!

It is reported that the skeletons of a company of soldiers were found in a canyon in New Mexico, near a spring whose water is poisonous.

There should be little doubt as to the therapeutic powers of a water capable of killing a whole company.

Health officer Veale addressed the Central Conference of Moral Workers on the strongholds of contagion in the city, and the danger from them in the event of cholera. The sweating system was roundly denounced and a crusade against it is about to be organized.

An electrical process for making indigo consists of oxidizing the yellow liquid formed from the dried plants steeped in water by passing an electric current through it from copper electrodes. The indigo thus formed is said to be purer and finer than that produced in the usual way.

Dr. John Hazlewood, of Eckerty, Indiana, is the proud owner of a heavy gold finger ring set with three diamonds, which, he asserts, was once the property of Marie Antoinette, the unfortunate Queen of France. The ring came into his possession through his maternal grandmother, whose grandmother was a

maid of honor at the French court during those troublesome days.

There is strong opposition to the proposed establishment of a floating cholera hospital on the Thames, on the ground that this disease is peculiarly prone to spread by water.

The typesetter is destined to figure in the funny columns pretty extensively if it does much work like the following, which we clip from the *Record:*

"105 houses to be built at once will front on Berks, Twenty-fourth, Twenty-fifth, and cmfwyrdlucmfwyrdlup 25½ and Norris Streets."

One of the peculiarities of the cocoanut palm is that it never stands upright. A Malayan saying has it that: "He who has looked upon a dead monkey; he who has found the nest of the paddy-bird; he who hath beheld a straight cocoanut, or has fathomed the deceitful heart of woman, will live forever."

A Paris baker found that by mixing a little chloride of tin, dissolved in hydrochloric acid, with bad flour and molasses, he could make gingerbread equal to the finest article prepared with honey. The police put an end to his little game, and ordered every cake to be hereafter stamped with the baker's name.

A Philadelphia coroner's jury in the case of a man who was run over by a freight car, brought in a verdict that the man committed suicide while temporarily insane. If the temporary insanity had been ascribed to the car it would have been better. The same jury ascribed the death of a child to acute ammonia.

The investigations in progress at Washington into the operations of the Whisky Trust have elicited some startling information. Charges of attempted bribery to dynamiting of competing distilleries are supplemented by accusations of grossest dishonesty in the manufacture and branding of the goods of the monopoly. Chemists show how whiskys of "age and quality" are produced artificially, by the aid of flavors, essences, and colors added to raw spirits and the suspicion prevails that the majority of the consuming trade have been outrageously swindled. Altogether, the disclosures have been decidedly sensational, of a nature to lead thinking men to consider the causes and conditions rendering possible the existence and triumphant progress of a trust so gigantic and unscrupulous.—*Pharm. Era.*

Several letters have appeared in the *Lancet* relative to the United States as a field for the British doctor. The last is from one who has resided here twenty years, and with true British gratitude to the land that has fed him so long, he gives it a left-handed blessing. America he deems the quacks' El Dorado, and the British doctor can't compete with them. [Judging by the accounts in the *Hospital Gazette* the B. D. can give the quack sixty points in one hundred and beat him.] The ratio of legitimate practitioners to the population he puts at one to five hundred, not including irregulars. This does not agree with Polk, who makes it one to eight hundred, including practitioners of all descriptions. However, he is right in one respect. The British doctor had better stay at home. We can worry along without him.

The following important changes in spelling have been recommended by the American Association for the Advancement of Science:

Aluminum for aluminium.
Cesium for cæsium.
Columbium for niobium.
Glucinum for beryllium.
Sulfur and sulfates, for sulphur, etc.

The suffix *ic* is used for metals only when contrasted with *ous.*

Ol is used exclusively for alcohols.

Final *e* is dropped from all the *ides* and the *ines.*

In such words as mil'lime"ter, the accent is as given.

Latin prefixes alone are used in derivatives of *valence.*

Arsin, for arseniuretted hydrogen, etc.

Gramme instead of gram, because the latter may be mistaken for grain.

A Curiosity in Prescriptions. — The curiosity given below is the work of a physician of Philadelphia. It required three days to procure all the ingredients, and the cost to the patient was $18, the muriæ puama alone costing, wholesale, $1.25 per ounce. I submit it, thinking it may prove interesting as an example of the true "shot-gun" prescription:

℞	Quinin. bisulph	ʒ iss
	Ferri pyrophosph	ʒ j
	Lith. bromid	ʒ iv
	Ammon. bromid	ʒ ij
	Sod. bromid	ʒ iv
	Fowler's solution	ʒ ¾
	F. E. muriæ puama (Prof. Miller's only)	ʒ viij
	F. E. nuc. vomic	ʒ ss
	F. E. ignatæ	ʒ ss
	F. E. hydrastis	ʒ vj
	F. E. hamamelis	ʒ iv
	F. E. staphisagriæ	ʒ ss
	F. E. sarsaparillæ	ʒ v
	Pancreatine, Pepsine (pure) } aa	ʒ ¾
	F. E. pulsatillæ	ʒ ss
	F. E. arnicæ	ʒ ij
	F. E. belladonnæ	gtt. xxj
	F. E. aconit	gtt. xv
	Aqua q. s. to make	ʒ xxxij

Mixt. Sig.—Two teaspoonfuls in plenty of water. Shake well. (Take after meals.)—T. L.—*Pharm. Record.*

Non-Political Health Officers.—Two hundred of Chicago's ablest physicians met on Saturday night and discussed the best methods of preventing and meeting a cholera epidemic in Chicago. It was agreed that pure water and clean back yards were of the greatest importance to prevent contagion. The streets were of minor importance from a strictly sanitary point of view.

Much importance was attached to the care of patients and to the enforcement of sanitary regulations by the local health officers. On this division of the subject a physicain said: "The health force should be kept out of the hands of political doctors."

The possibility of a visitation from cholera renders all the more important the election of a mayor who will give to the city a non-partisan administration on business lines. Mr. Allerton will not have to load the health department down with political doctors in payment for ante-election services or in hope of future elections.

Cholera and Carter Harrison would be a perilous combination.—*Chicago News.*

Phonograph Monkey Talk.—Prof. Garner has written a letter to his brother in Australia in which he declares that he has "succeeded beyond his wildest anticipations" in his experiments with monkey talk in Africa. He says: "I am safe on the coast, just reeking with quinine, the proud possessor of a chimpanzee that can say 'Tenakoe Pakeha,' which is, you know, the Maori for 'Good day, stranger;' a gorilla that knows about twenty words of Fijian, and a female ourang-outang that has picked up 'Tonner und blitzen' from my German valet, and has, judging from her actions, quite fallen in love with him. I have also got written down—which is more important—nearly 200 monkey words. Here are a few, spelt phonetically: 'Achru,' meaning sun, fire, warmth, etc.; 'kukcha,' meaning water, rain, cold and, apparently, anything disagreeable; 'goshku,' meaning food, the act of eating. You will see from this that it is a very primitive language; there are, perhaps, not more than twenty or thirty words in it that I have not already got, so that my task is now practically completed."

When his battery, phonograph and revolving mirror began to work he says that "the glitter of the mirror soon attracted a host of chattering monkeys. I watched them for an hour and then cautiously approached. They disappeared like magic when they saw me—all but one, a chimpanzee. When I got close to it I found that it took no notice of me, but stood as transfixed, with widely opened eyes and dilated pupils, gazing at the mirror. There was a slight tremulous motion in the limbs and a spasmodic twitching of the ears. I could hardly believe it. The animal was hypnotized. It was making a guttural sound like 'achru.' When I subsequently listened to the 'gram' I found that a similar sound was frequently recorded thereon amid what was then to me an unintelligible jumble of monkey chatter. I put the monkey in a bamboo cage, and on examining him about an hour afterward found him still under the hypnotic influence. I revived him with a good, strong

sniff of ammonia, and held a lighted taper before his eyes. He was quite tractable and said 'achru,' and a few more tests satisfied me that this word embodied the idea of heat, light, warmth and brightness. Other words followed, and it was wonderful to take note of his awakening intelligence."

AN ACT

To prevent the spread of tuberculosis among domestic animals.

SECTION 1. *Be it enacted, &c.*, That when it shall be brought to the notice of the Governor and Secretary of the State Board of Agriculture, that a contagious disease known as tuberculosis exists among domestic animals in this state, they may take proper measures to prevent its further spread.

SECT. 2. That for this purpose they shall have power to place infected animals, herds and premises in quarantine; to employ such assistants as may be necessary to properly carry out the provisions of this act and to fix their compensation, and to regulate the movements of animals likely to convey the contagion from the infected premises.

SECT. 3. That any person or persons wilfully violating any of the provisions of such quarantine, or wilfully interfering with officers appointed under this act, shall be deemed guilty of misdemeanor and shall upon conviction be punished by a fine not exceeding one hundred dollars or by imprisonment not exceeding one month, or both, at the discretion of the jurisdiction under which conviction is secured.

SECT. 4. That when it shall be deemed advisable to condemn and kill any infected animal or animals and an agreement cannot be made with the owner or owners thereof as to their value, three appraisers shall be appointed who shall, under oath or affirmation, appraise the animal or animals taking into consideration their actual condition at time of appraisement, and the owner shall be paid one-half of the said appraisement. *Provided*, that no such appraisement shall exceed forty dollars for any one animal.

SECT. 5. That all necessary expenses under the provisions of this act shall, after approval in writing by the Governor and Secretary of the State Board of Agriculture, be paid by the State Treasurer upon the warrant of the Auditor General in the manner now provided by law.

SECT. 6. That the Secretary of the State Board of Agriculture may, upon application from the owner or owners of any herd, detail a proper veterinary surgeon to examine said herd, and on the report of such a surgeon, may issue a certificate showing the condition of the herd at the time of examination. *Provided*, That the expenses of such an examination shall be paid by the owner or owners of the animals examined.

SECT. 7. That all acts or parts of acts inconsistent herewith be, and the same are hereby repealed.

The Medical Digest.

ON THE MODE OF ADMINISTERING TAR.

BY WILLIAM MURRELL, M.D., F.R.C.P.,

[Physician and Lecturer on Materia Medica and Therapeutics, Westminster Hospital.]

THE value of tar in the treatment of chronic bronchitis has long been recognized, and the literature on the subject is somewhat extensive. Putting aside the works of Axtius and of Roburg, it may be said that attention was first generally directed to the subject by the publication of the "Siris" of the Right Rev. Dr. Berkeley, Lord Bishop of Cloyne. This book ran through several editions, and was translated into almost every European language. In 1823 Sir Alexander Crichton published a work on the value of tar in the treatment of pulmonary affections, in which he gave details of cases treated in tar chambers. In 1860 Sales-Girons issued a book much on the same lines, advocating the employment of inhalations and fumigations of tar. In 1875 I recorded a number of cases of bronchial catarrh and winter cough treated with tar, and since then papers and cases by the score have appeared in almost every medical journal all over the world.

Although tar is admittedly an excellent remedy, not only for winter cough, but for many other complaints, there are

a good many difficulties in the way of its administration. In the first place, there is the old-fashioned tar-water, which is still used as a domestic remedy in many parts of the country, but tar is very sparingly soluble in water, and several pints of that somewhat insipid fluid would have to be taken in order to get anything like a real useful dose of tar. Then there is syrup of tar of the United States Pharmacopœia, the use of which I advocated many years ago. In making this preparation the tar is washed with cold water for twenty-four hours, and the fluid is then thrown away, boiling water being subsequently added. Whether there is any advantage in the preliminary washing is a point on which there is some difference of opinion. At all events it is a very good preparation, although it cannot be said to be a very strong one.

Next there is a patent preparation used in America which is simply a solution of tar in old Jamaica rum. It is certainly palatable, but winter cough is a very chronic complaint, and if a wineglassful of this concoction were taken every time the patient coughed he would stand a very good chance of never seeing summer again. Tar may be made up into pills with lycopodium, but they are of necessity somewhat bulky, and the prospect of having to take two pills every four hours all the winter through is not a pleasant one. Tar is often put up in perles or capsules, and on the Continent it is sold in the form of the "Dragées de Christiania au Goudron de Norvège," but they are expensive, and are not adapted to the tastes of English consumers. I have recently had my attention called to the tabloids of tar, containing one grain in each, and these I think constitute by far the best mode of administering the drug. They contain the whole of the constituents of tar, and they are palatable and speedily disintegrate. The usual mode of administration is three or four every four hours, but a better plan is to suck one frequently, in fact, every time the cough is troublesome.

On Benzol as a Therapeutic Agent.—Benzol, or benzene, is comparatively little used in medicine. It was originally made by distilling benzoic acid with lime, but was subsequently found to exist as a constituent of coal-gas tar. In the Appendix to the British Pharmacopœia it is described as a colorless volatile liquid obtained from coal-tar. For internal administration it is purified by treating it with sulphuric acid and redistilling. It is a pretty active poison. People who use benzol systematically in dyeing and cleaning clothes suffer from headache, vertigo, and symptoms of intoxication passing on in some cases into delirium. Taken internally, it dilates the pupils, produces irregular stertorous breathing, weak pulse and marked coldness of the extremities. Death has resulted from taking three drachms. It is not only a powerful toxic agent, but in small doses possesses useful medicinal properties. The formula I usually employ is: Pure benzol, one and a half drachms, oil of peppermint, half a drachm; and olive oil, two ounces. This makes a very palatable preparation. The dose is from ten to thirty drops on sugar every three or four hours. I have used it in some cases of influenza, and in over a hundred cases of chronic bronchitis and winter cough. It is an expectorant and sedative, and in obstinate cases which have resisted other remedies is certainly most useful. In the dose I have mentioned I have never found it produce toxic symptoms or any unpleasant result.—*Med. Press & Circular.*

FRENCH NOTES.

Translated by E. W. Bing, M.D.
Chester, Pa.

Achillodynia—Under this term Prof. Albert (Vienna) describes a condition, which he has observed several times. In this affection, walking and standing are rendered insupportable from the pains, which disappear as soon as the patient, sits, or lies down. The pain is felt exactly at the insertion of the tendo-achillis, which seems also, somewhat thickened. There exists a little hardness, sensible to pressure. In other cases the periosteum adjacent to the tendon is swollen. The pains are stubborn and seem to resist all treatment, hot or cold applications, iodine, etc. It seems to depend on rheumatic influence, as it often occurs in patients who have had muscular or articular rheumatism. In 1883 Raynal described peritendinous cellulitis of the tendo-achillis, but the description does

not tally with Albert's observations. Pitha described partial rupture and tearing of the insertion of the tendon and the signs correspond to those described above. He also mentions the tenacity of the affection. The disease has been known to exacerbate under the influence of an attack of gonorrhœa. Cases of pain in the tendon due to flat foot are to be excluded. (The affection has been cured by a combination of phenacetine, acetanilid and quinine, in a few days.—B)—*La France Medicale.*

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Paralysis Following Cholera Infantum. — Bezy observed a child of fourteen months who had paralysis of the cervical muscles, soon followed by paresis of the anus, as a sequel of gastro-enteritis. The intestine was the gate of entry for an infection to which the paralytic phenomena were ascribed. The paralysis rapidly got better. The condition can, without doubt, be attributed to the action of the bacillus coli commune. (Hanot). Intestinal trouble often precedes infantile paralysis. (Siredey).—*La France Medicale.*

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Apropos of the Treatment of Diphtheria.—The general opinion is that it is necessary above all things to destroy the bacilli and the streptococci, to combat the toxic effect of their products and to sustain the patient. As to the best means of doing this opinions are divided, especially among the Germans, as will be seen from the following epitome:—

Baginsky considers the best treatment to be corrosive sublimate, $\frac{1}{3000}$ for gargles, and $\frac{1}{500}$ for local use, with sprays of lactic acid and papaine. Result: Mortality of forty per cent.

Struebing uses locally solutions of iodophenol, tr. iron and sulphur, with gargles of lime water, and cyanide of mercury internally. Later on he uses locally carbolic acid, alcohol and turpentine.

Wilhelmy cauterizes the diseased surfaces with solution of zinc chloride 20 per cent. and uses gargles of lime water with spirits peppermint.

Barbin is of opinion that the most effectual local application consists of sulpho-carbolic acid 20 per cent., applied every hour during the day, less often at night.

Stein extols the method of Burghardt, generous diet, gargles of lime water and insufflations of a mixture of quinine and sulphur.

Janicke and others use methyl violet locally, from 2 to 10 per cent. solutions or powders.

Gunz prefers chrome water, containing in the daily supply ⅓ grain bichromate potash.

Ozegowski has used for ten years a mixture of three to five parts each of carbolic acid, citric acid and tinct. iodine in 100 parts of brandy. This is applied to the throat every two or three hours.

Martin employs locally a mixture of carbolic acid one part, camphor one part, glycerine fifty parts, water fifty parts.

Moskowitz & Klein (of Lugos) are satisfied to apply neapolitan (blue) ointment to the cervical region, believing that expectant treatment is as good as any other.

Wissing saturates the air of the room with turpentine by evaporating five ounces daily, near the patient.

Lebwartz recommends sozoiodol in solution or powder.

Hagedorn has recourse to the galvano cautery.

It results therefore that the local treatment should be antiseptic, but the best antiseptic has yet to be decided on.—*L'Union Medicale, du Canada.*

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The Present Treatment of Epilepsy (*La France Med.*)—In a review of this subject, Eulenberg gives first place among drugs to the bromides, and considers bromide of potassium as the best. With an idea that a combination of the several bromides acts better than a single preparation, he gives the salts of potassium, sodium, and ammonium in the proportions of 2, 2, 1. He gives the dose in carbonic acid water to avoid cumulative effects and bromism, both by exciting the renal function and by increasing the solubility of the drugs. For eight years he has used bromine (ized) water with success. The effervescent bromides are also useful. All should be freely diluted. As to doses, they should be hardly less than 5 grms. (75 grs.) for adults; often, they may be increased to 9 or 10 grammes,

to be given two or three times. The time of the attack regulates the dosing. If it occurs during the day, 2 strong doses are given, in the morning, and at noon. If the attack comes on exclusively at night, a single dose at bedtime is given. The bromides should be continued for a long time, at least for two years after the last manifestation During the whole treatment the drug should never be intermitted except for intercurrent affections. Menstruation and pregnancy are not contra-indications. It is useless to vary the doses and as soon as the daily dose proves sufficient it should be maintained during the entire treatment.

There are instances where the bromides are not well borne, or have no action. These cases form about fifty per cent. of the whole number of cases. Other drugs may then be tried, among them the new antipyretics and ergot. Hygienic treatment must not be overlooked; the mode of living must be regular and free from excesses. All excitants are avoided; coffee, tea, tobacco, spices, and especially alcoholics. Meals should be frequent and small in quantity. The evening meal especially should be light and should not include meat or fatty substances. If there is anæmia, a diet rich in nitrogenous matters should be used. Bathing is important, but river baths and sea baths are contra-indicated. The patient should be much out of doors. Eulenberg does not consider treatment by electricity rational.

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Hypnotism Among the Annamites. (Dr. Michaud, Yokohama).—It would seem at first sight that the Orientals ought to escape the neuro-pathic defects so frequent among Europeans. The easy mode of life, the rarity of intellectual overwork, the absence of poisons which induce nervous affections such as alcohol and tobbacco ought to preserve these people from neuroses whose frequency increases daily in the western races. Attentive examination shows that it is not so. The Japanese, Chinese and Annamites are subject to nervous disorders. It would be interesting to attempt, from a side still unexplored by pathologists, a study, having for its aim to do for the Japanese painters, and the painters of religious subjects in particular, what the school of Salpetrière has so well done for our European art, in the investigations into "Hysteria in Japanese art, and hysterical manifestations in religious practices in the extreme East." It would not be difficult to find in the Japanese masters certain attitudes, certain movements, reproduced from nature and which prove the undoubted existence of hysteria in these peoples.

Among the Annamites, hysteria in the women is relatively rare; on the other hand, in males it is sufficiently common, especially in the educated, the interpreters and those who by their profession have any continued mental work. There exist in Tonquin and in Annam a large number of religious practices, superstitions, in which may be easily noticed not only the marks of hysteria but the signs of suggestion. There is an entire sect of natives, sorcerers, priests and diviners, who live by their art, sorcery. In the country they are greatly respected, frequently consulted, and they are enveloped in mystery. They also practice medicine of an elementary character, which combines the uses of Chinese drugs, and massage. Massage of the head, for instance, is employed as a last resort in all grave maladies.

The study of the magnetic passes is not wanting in interest, for it is not rare to witness ceremonies where the magician or sorcerer falls back on suggestion and hypnotism to develop his subjects. But there also exist in Annam, true sorcerers, the "phu-long" and "phu-toni." What is particularly curious in the cabalistic practices of this class is the use of certain procedures of hypnosis, absolutely analogous to those methods employed in Europe by physicians who use hypnotism. Thus the Annamite produces sleep by causing the patient to fix his eyes on some brilliant object. He then seats himself in front and delivers a long speech, accompanied by gesticulations; the patient has received orders to keep his eyes fixed on the object (which is generally a lighted incense stick. "joss stick," placed behind the operator's ears) and the rapid movements of this during the gesticulations, is not slow in producing sleep, if the subject is hypnotizable. Another plan is to agitate a small scarlet flag before the patient's eyes, making it perform a figure of eight motion and causing a snapping sound. The gong

employed at La Salpetriere and at Nancy has an analogous action. The Annamites are very good subjects, and some have a surprising capability for hypnotic impressions. As to hysteria and neurasthenia, it may be said that they are so frequent as to be the rule among this nation. The causes are numerous, but the most important is the abuse of opium. Morphinism and morphine insanity are widely spread and are due to opium smoking.

The hysteria is of toxic origin as Neveu-Derotrie has shown, morphia, like alcohol and tobacco, may be the cause of hysteria, and that the absorption from the lungs produces the poisonous effects quicker than by hypodermic application. All the disorders and the phenomena commonly observed in hysteria may be produced by this drug from the ocular troubles to the paralyses, from mental disorders to the anæsthesias. It would be interesting to define the limit between the symptoms due to opium and those proper to hysteria. Since in Japan the use of opium is interdicted there must be some other causes. Poor food, almost entirely vegetable, intellectual overwork, poverty and excessive labor are the principal factors in the production of hysteria among the Japanese students. In a particular class of students, the "Sochi" exaltation, homicidal tendencies, impulsion, the true hysteric madness were observed. Manifest traces of a neurosis are found in the Japanese paintings illustrative of popular legends, such as the transformation of a woman into a fox, and vice versa. There is at Tokio a temple much frequented by the people which is dedicated to Asakusa, it contains a wooden statue which, according to popular belief, can cure all diseases. It is requisite to rub with the hand the part of the statue corresponding to the diseased organs of the patient, and then to rub the diseased part itself. It is infallible. Does not show evident signs of the power of suggestion. Again, at the anniversary of the death of Ochaka, who carried Buddhistic doctrines to Japan, the priests place his effigy in a metal basin, then the patients perform ablutions with consecrated water, after having first sprinkled the statue. The disease disappears—the paralytic regains the use of his limbs, the blind recover sight. Are not all these cures in great measure dependent on the cure of the hysterical condition? Among the Annamites there are ceremonies which resemble those of the dancing dervishes, and which result in the same way. When exhausted from the exercise and want of breath, they fall to the earth and remain motionless, in a cataleptic condition, insensible to all external influences, completely anæsthetized. In short, it is the picture of the classical climax of hysteria. The object of these ceremonies is to inform the patient of the name of the demon who is pursuing him with his anger, and to find means to propitiate him and appease his wrath. These find a parallel in the practices of the middle ages.—*Bulletin Generale de Therapeutique.*

Taenia in Children.—(Bauenel).—*Jour. de Paris.*—Ol. male fern three grammes, syrup of turpentine, distilled water, each twenty-five grammes, powd. gum arabic two grammes. To be taken at one dose, and followed in two hours by castor oil.

New Ichthyol Pencils for Intra-Uterine Applications.—Sublimate gr. 0.01, ichthyol gr. 0.20, talc. gr. 0.65, gum gr. 0.04, glycerine gr. 0.05, water gr. 0.05.—*Hirigoyen.*

GERMAN NOTES.

Translated by Dr. AD. MEYER.

The Contagiousness of Diphtheria.—In an excellent paper read before the Hufeland'sche Gesellschaft of Berlin, Dr. Gottstein says, as the result of careful observations, that the contagiousness of diphtheria is not very great, that it depends more on the virulence of the poison than on insufficient isolation. Experience shows that the methods of isolation commonly used are insufficient in severe cases and that they are unnecessary in slight ones; the danger for children to catch the disease is fortunately very small (with the exception of very virulent forms), whereas the disposition for catching measles by contagion is ninety-nine per cent., in scarlet-fever thirty per cent. of the cases. The disinfection of the houses is easy where the virulence is slight, but very often a fail-

ure in the most dangerous cases, as many lamentable experiences show.—*Deutsche Mediz. Zeitung.*

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Treatment of Epithelioma with Arsenic.—Dr. Lassar showed in the Berlin Medical Society a woman who came to see him in October, 1892, with an ulcerative epithelioma of the face about the size of half a walnut. Both the clinical appearances and microscopical preparations proved the diagnosis epithelioma. The patient had to undergo a rational cure with arsenic, (Fowler's solution) and the ulcer has been healed since December. L. has two other cases of the same kind, with marked improvement. (It is good to remember that Lassar's cases are of that slowly progressive character of epithelioma of the face, which is called rodent ulcer, and which may heal spontaneously according to Kaposi.)—*Deutsche Med. Zeit.*

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On Cold and Warm Applications.—Dr. Silex shows that cold applications (ice or water of 55° F.) on the eye cause a rising of the temperature of the conjunctival sac, and that warm applications of 96-115° F. (and Priessnitz fomentations) cause a fall of temperature. It seems that the same result was obtained in applications on the abdomen, if they did not last a long time and did not cover too great a portion of the surface. This can be explained by reflex action on the blood vessels of the deeper parts. We can thus understand the usefulness of poultices in pleurisy and also the usefulness of cold Priessnitz fomentations. On the whole, however, the patient himself will still be the best guide for the choice between cold and warm.—*Deutsche Medizinal Zeitung.*

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The Treatment of Tetanus.—Prof. Peter Albertoni in Bologna reviews 167 cases, of which 131 had been cured, under thirty-nine different treatments. He comes to the following conclusions;

1. That tetanus can be cured with many and widely different means, that, in other words, it often ends in recovery naturally or even notwithstanding the treatment.

2. That tetanus is not such a dangerous disease as is generally supposed.

Tormani's official report on the cases of tetanus that recovered or died in the Italian hospitals shows that the mortality in the years 1882-1887 was forty-four per cent. Tizzoni's and Cattani's treatment with the serum of immune dogs was used in cases that would have recovered anyhow. In most cases the treatment was begun after the first week; the temperature had been increased only very slightly, and the respiration was not much disturbed. The experiments were therefore not quite conclusive. A. considers the chloral treatment to be the most reliable method, both for relieving the pain and for actual help for the cure. Verneuil claims that in the war of 1870 he has obtained cures in fifty per cent. with high doses of chloral. Carpenter and Todd had very favorable results from applications of ice on the spine. This method seems to be rational, as fever in tetanus is of so great significance. Richet's newest experiments on the electric tetanus have given a proof to these facts, and Gaglio has shown that animals, which have got a mortal dose of strychnine, could be saved by means of artificial refrigeration through application of snow and cold water.—*Therap. Monatshefte.*

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The Danger of Iodide in the Treatment of Syphilis.—Dr. E. Finger (Wien) describes—besides the well-known symptoms of acute iodism, coryza, conjunctivitis, eruptions and gastritis—a few rarer symptoms which may become quite distressing. The conjunctivitis may be accompanied by œdema of the lids, and even by ecchymosis, the coryza may lead to œdema of the nose and even of the whole face; the ordinary stomatitis too may show ecchymoses and œdema of the mouth and pharynx, and even œdema of the glottis. Further, he has observed a form of intoxication quite analogous to the intoxication with alcohol, probably due to hyperæmia of the brain; moreover he saw neuralgia of the fifth nerve and paræsthesia in the extremities. Two interesting cases showed a real danger of acute iodism. In a man with beginning cerebral syphilis (continued headache and dizziness) and syphilitic periostitis of the tibia. Finger gave the

patient two doses of 1. 5 (22 grains) within two hours; the next day the left arm and the left leg of the patient were paralyzed, in the night the headache had become worse and the face flushed. An energetic treatment with mercurial inunctions removed all the symptoms, and afterwards iodide of soda in slowly increasing doses was well borne. The second case is a man of about 60, with syphilitic chorio-retinitis. The first dose of iodide caused a severe intoxication, conjunctivitis, coryza, severe headache, and a distinct progress of the disease of the eye: the next day ophthalmoscopic examination showed new hemorrhages in the retina. It is therefore advisable to prevent symptoms of intoxication, especially where there is syphilis of the head. Dr. Finger enumerates the following preventive methods: The best is to dissolve each dose in ½-1 pint of milk and even more. Extractum belladonnæ (0.01 pro 1.0 gramme of iodide) recommended by Aubert is less reliable; the same dose of the bromide and of the iodide acts sometime favorably. Among the remedies for acute intoxication F. mentions, first, quinine (Wallace) in doses of 0.15-0.20 (about 3 grains.) Roehmann recommends bicarbonate of soda 10.0-12.0 (2-3 drachms) in two doses within 24 hours, or 4 grammes (1 drachm) after every dose of iodide. Antipyrin .0.5, 2-3 times in intervals of 30 minutes, acts favorably against cerebral symptoms.—*Deutsche Medicinal Zeitung.*

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Test for the Urine in Beginning Jaundice.—Dr. H. Rosin (clinic of Prof. Senator, Berlin), recommends the following modification of Maréchal's test for bilirubin in the urine: Prepare a solution of ten parts of tincture of iodine in one hundred parts of alcohol. Take some urine into a test-tube, add carefully along the wall of the inclined tube 2-3 ccm of the reagent so that it forms a distinct layer on the urine. The presence of the smallest amount of bile-pigment is shown by a grass-green ring between the reagent and the urine. This test is successful where Gmelin's nitric acid test and Maréchal's test with ordinary tincture of iodine fail. It shows the slightest trace of jaundice.—*Berliner Klin. Wochenschrift.*

A Rule in the Surgical Treatment of Tubercular Joints.—Prof. Salomoni gives in a lecture the following interesting statement: There is a great similarity between tuberculosis and cancer. As in the latter, it is important to know that those cases of arthritis, in which the corresponding glands have already become infected and thus form new colonies of the disease, give a worse prognosis, and that these glands have to be removed with the same accurate care as the foci in the bone. The results of arthrectomy, resection and amputation for tuberculosis of the joints have been remarkably improved since we remove methodically and most accurately the lymphatic glands of the region as well."—*Centralblatt f. Chirurgie.*

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Iodoform Emulsion in Chronic Cystitis.—Dr. Filippow (Charkow) has treated three patients according to v. Mosetig-Moorhof's method with very good results. At intervals of several days he injected from twenty to forty grammes (¾-1⅓ ounces) of a ten per cent. iodoform emulsion into the bladder, after having washed it out with a ¼ per cent. solution of acidum lacticum; in about one-quarter of an hour the iodoform has sufficiently settled and the liquid is let out. In a case of four years' duration, nineteen injections were necessary. There was no intoxication with iodoform observed. The washing of the bladder previous to the injection is said to be of importance. Further trial would be advisable.—*Centralblatt f. Chirurgie.*

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On the Treatment of Nephrolithiasis.—Dr. Golowin (St. Petersburg) gave the patients three times a day, with the meals, magnesia usta and carbonate of lime, fifteen grains of each. The patient had not to change the ordinary diet. With this medication he wishes to prevent the resorption of acid phosphates and of soluble oxalates, by bringing them into an insoluble form *within the bowel.* This plan has its foundation in the experiments of Riesel and Lehman, and in the experience with mineral waters and in theoretical considerations. The results have so far been very promising. The sediments of urates and of oxalates disappear from the urine, sometimes very rapidly; the

sciatic neuralgia, so frequent in these cases, ceases; the numerous symptoms of neurasthenia and psychical depression disappear; whereas pre-existing calculi are not influenced, the new formation of renal sand and the consecutive renal colics are stopped. This medication has the advantage that it can be continued a long time, whereas prolonged use of alkalines is apt to cause disorder in various parts of the body.—*Deutsche Mediz. Zeitg.*

Surgery or Electricity in Gynecology.—The conclusions suggested to my mind are: *First.* That temporary conditions of acute pelvic inflammation, due to non-septic causes, are quick, as a rule, to respond to the ordinary palliative measures for allaying inflammation, such as the use of salines, rest in bed, etc. That if properly treated they are apt to get well without leaving any permanent lesion behind them.

Second. That for the treatment of pelvic disease the use of electricity, even in skilled hands, has proved uncertain in its results and is fraught with possibilities so dangerous as to preclude its use as a therapeutic agent, in the manner at present advocated.

Third. That when the history of a case, and careful and intelligent examination prove a pelvic malady to be of long standing, and a source of persistent ill health, it is poor practice to waste time in prolonged palliative treatment, when an exploratory incision can clear up the obscurity and prepare the way at least for intelligent management.

Fourth. That in acute cases, where masses are found in the pelvis, and the accompanying history and symptoms point to the probability of the existence of conditions which delay may render dangerous, there should be early and prompt resort to operation.

Fifth. That for the attainment of satisfactory results from such operations the skilled workman is required; therefore their performance should be delegated to the few whom natural gifts, training and surroundings, enable to attain a high degree of excellence in abdominal and pelvic surgery.

Sixth. That all gynæcologists should not consider it their duty to attempt this work, which constitutes a distinct and comprehensive branch of surgical science.

Seventh. That all physicians should be more thoroughly trained to appreciate the existence of conditions demanding the care of a specialist, and should be more disinterested in referring such early to the proper sources for help.—Fullerton, *Woman's Med. Jour.*

Kumyss, from Kumysgen.—A woman 25 years of age, had suffered for two weeks from anomalous chilly sensations, followed by flushes, malaise, headache, and, at times, a little nose-bleed. Her bowels had a tendency to looseness. Four or five months previously she had suffered from typhoid fever, and, as she expressed herself, "felt just as if she were going to have the fever again." When first visited her pulse was 108 and temperature 102 degrees. She had been sick, vomited, had a severe headache, felt very heated and thirsty, and had considerable abdominal tenderness. The pain was not seated in the right iliac fossa, but was in the neighborhood of the umbilicus. There had been some kind of a rash upon her body during the preceding week, but, upon inspection, no rose-colored spots could be detected. She also complained of pain in the right side of the chest, but nothing abnormal was revealed by physical examination. On the next day she was somewhat better; the bowels were not opened and the tongue was very dirty. She continued to improve for several days, when she arose from her bed and ate imprudently, and was again attacked by sickness and pain. This patient was disposed to be unruly, but after the second recurrence of symptoms denoting intestinal irritation, presumably in Peyer's patches, she became more obedient. She was restricted for several days to a kumyss diet, when soft articles of food were permitted, the bill of fare was gradually enlarged, and there was no further recurrence.—Shoemaker, *Med. Bulletin.*

Urethrectomy for Obstinate Stricture.—In the *N. E. Med. Monthly* for March, Manley describes two cases of urethral stricture in which urethrectomy was performed, the affected tissues being removed *en bloc.* A whalebone filiform

bougie was utilized as a guide, and the operation performed as follows:

"First, an incision running diagonally to the long axis of the body was made, through dense scirrhous tissue, until the guide was reached, when a linear incision was made in either direction through the stricture, which was but little more than one centimetre in length.

"When this was laid widely open, it was freely tunneled out from below, by cutting away a furrow through the calloused urethra, the convexity of which, was above, with its base below.

"A No. 12 catheter was now passed through, and the entire passage flushed, after which it was removed, and the urethra permitted to remain empty. The flow of the urethra was now reconstructed, by approximating the peri-urethral tissues from below, the structures from within out being replaced by three rows of catgut-sutures.

RESUME.—(*a*) "It seems then, from the foregoing, that in all cases of traumatic rupture of the perineal urethra, the tissues should be laid open at as early a date as possible; and the continuity of the lumen of the urethra should be then entirely restored by a urethrorraphy.

(*b*) "In those urethral perineal fistulæ which resist dilatation or other tentative measures, regardless as to whether they are of a traumatic or blenorrhagic origin, they should be resected; and continuity restored in the passage by homologous approximation of the separated edges, the hiatus remaining being obliterated, through linear elongation of the fibres of the muscular coat.

(*c*) "With those strictures rebellious to tentative methods, not appropriate for internal urethrotomy or divulsion, when they are divided by an external incision, the occasion should be utilized to hew a gutter through the cicatricial tissue; and to reconstruct the floor of the canal with the adjacent connective tissues.

(*d*) "In all cases the most rigorous asepsis should be employed; and the aim, in every case, should be to secure non-suppurative, primary union.

"I am particularly desirous in this report to state, that though the operations here reported are the first of the kind performed in America, I am solely indebted to Dr. Wile for being the first who demonstrated the principles of them to me, gave me the inspiration, and assured me of its success."

DESQUAMATIVE ENTERITIS.—The treatment consists in absolute rest in bed, a cheerful room with hygienic surroundings, and fresh air; while careful avoidance of purgatives cannot be too strongly insisted upon. Outward applications, such as blisters, iodine, etc., are of little or no value.

The diet should be so regulated as to prevent as much as possible the formation of fæces; and therefore such articles of food as bread, eggs, coarse-grained vegetables, etc., should be avoided. Stimulants are hurtful.

The drug in which one would place the greatest reliance is opium. The intestinal tract, being in a state of inflammation and over-distension from the accumulation of a large column of fæces, requires rest; while an easy action of the bowels may be obtained by means of enemata of tepid water, or of a one per cent. solution of sodium chloride. Such enemata are especially indicated when the membranes occlude the whole intestinal canal, as frequently happens. A prolonged warm full bath is often successful in relieving distressing symptoms.

Dr. John Williams advocates the administration of liquor arsenicalis, in drop doses, for a long time.

Friction of warm olive oil to the abdomen is certainly helpful. A flannel roller, eight or ten inches wide, may be worn round the abdomen, and affords support and comfortable warmth to the intestines.—Light, in *The Practitioner*.

TINCTURE OF IRON FOR BURNS.—At the earliest possibility after the occurrence, apply the tincture of iron over the surface of the burn with a feather or soft brush, so as to moisten it everywhere. Where the cuticle is not destroyed and removed it should be used full strong; if the cuticle is gone and the surface raw, dilute with water one-half or two-thirds. How prompt the relief from pain is after the application no one can tell save one who has tried it. In scalds and superficial burns the immediate application will not only allay the pain but prevent blistering. There is a character-

istic feature connected with burns that deserves consideration, and that is the tendency to too much and too long continued suppuration—to become chronic and to continue indefinitely. Old sores from burns have usually been hard to cure. For the relief of this kind of traumatisms the proper course to pursue is to prepare and use a salve in the following way: Take of vaseline or lard one ounce, of tincture of iron one drachm, more or less, combine the two by rubbing together either in a mortar or in a plate or saucer with a knife or spatula. Spread this salve thinly upon a soft cloth and apply to the entire raw surface; this will soon diminish the flow from the raw surface and cause it to heal rapidly.—E. F. Starr, *Atlanta M. & S. Jour.*

For Irritable Cough:—

℞. Acidi hydrocyanici diluti . . . ℥ iss
Morphinæ acetatis . . . . . gr. iss
Mucilaginis acaciæ . . . . . ℥j
Syrupi pruni virginianæ . . . ℥ iv
Aquæ ad . . . . . ℥ vj

Misce et fiat mistura. A teaspoonful to be sipped every four or six hours.

For Psoriasis:—

℞. Acidi chrysophanici . . . . . ℥ ij
Liquoris gutta percha . . . . ℥ iij

Misce. Paint the solution over the affected parts; and when it is dry apply flexible collodion over surface.

Collodion for Gouty Joints:—

℞. Morphinæ acetatis . . . . . gr. xx
Acidi salicylici . . . . . ℥ ij
Ætheris
Collodii flexilis, ... aa ℥ vij

Misce. To be applied to the painful joint.

For Chronic Bronchitis and Emphysema:—

℞. Ammonii carbonatis . . . . . gr. iv
Tincturæ scillæ . . . . . ♏xx
Spiritus ætheris . . . . . ♏x
Tincturæ nucis vomicæ . . . . . ♏x
Infusi serpentariæ ad . . . . . ℥j

Misce et fiat mistura. Two tablespoonfuls every six hours.

A Valuable Counter-Irritant in Diseases of the Chest:—

Aceti cantharidis . . . . . ℥ ij
Spiriti camphoræ ad . . . . . ℥j

Misce et fiat linimentum. Apply to the chest at bedtime until redness is produced.

—*The Practitioner.*

Langermann reports very unfavorably on tuberculocidin; fresh tubercular invasions taking place during its administration.

In the *Woman's Medical Journal* for February is reported the case of a child, 18 months old, who suddenly refused food, failed, became restless and sleepless. There was no nausea except when feeding was forced.

For no particular reason except impulse, the doctor ordered olive oil. The fourth spoonful brought up a red clover blossom, and the child at once recovered.

Thymacetine has been tried by de Montyel, who found that it increased muscular force, elevated the temperature about 1° C. for two hours, hastened respiration, increased pulse-rate and arterial tension, and this was followed by lassitude. It also caused thirst, warmth in the stomach, nausea, desire to urinate, and a bitter taste. In large doses the effects were more marked and unpleasant.

On the Action of Apioline.—Dr. Pelletan. (Paris), in his clinical notes on apioline, states that the drug administered in spherical capsules of 20 centigrammes each, has proved in his hands a true stimulating emmenagogue, acting directly on the ovaries and uterus or the ends of the nerves contained in them by irritation of the mucous membrane during its elimination through the utricular glands and by producing hyperæmia of the ovaries during the circulation through them; the pain in spasmodic or congestive dysmenorrhœa is thereby relieved.

It is moreover indicated in atonic amenorrhœa, when the uterus and the ovaries are primarily at fault and the inactivity is not due alone to anæmia.

In fact, in all cases amenable to internal remedies, where a correct diagonosis of the symptoms had been made and suitable hygiene and treatment observed, he found apioline relieved the suppression, regulated the catamenia and prevented or removed the accompanying pain and proved to be a most powerful emmenagogue.

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"ON ELECTROLYSIS."—RELIABLE TABULAR STATISTICS; WITH SOME REMARKS.

By ROBERT NEWMAN, M. D.,
NEW YORK.

[Fellow Amer. Electro-Tnerapeut, Assoc. Formerly Prosector and Chief of Surgical Clinic L. I. C. Hospital; Consulting Surgeon to Hospitals in Hackensack, Bayonne, Home in Yonkers, West Side German Dispensary, etc., etc.]

THE TIMES AND REGISTER specials have proven a great success. The issue of January 21st, devoted to "*Electrolysis in Strictures*," contained very valuable articles, reporting many successful cases treated by electrolysis by different operators. In the main points all agree, and the writer is indebted to the medical press, for giving him credit for his method and instruments in the treatment of urethral strictures by electrolysis. This method has been practiced very extensively, more than is known generally, and it will be of interest to peruse some of the statistics gathered from published records, or from direct communications by the respective operators, as contained in the following table.

STATISTICS OF REPORTED CASES OF URETHRAL STRICTURES TREATED SUCCESSFULLY BY ELECTROLYSIS.

	Cases.
T. F. Frank, Pittsburg, N.Y. Medical Record, Feb. 2d, 1874, etc.; and verbal report, *estimate*,	30
(Dr. Frank has treated many more cases, but not having a correct statement on hand a low estimate is given.)	
Carl Weiss, Buffalo, letter July 29, 1878	6
John Butler, Amer. Jour. of Electrology, October, 1879, N. Y. Journal Homœop., August, 1873; N. Y. Medical Times, November, 1882; text book Elect. Therap., 1879,	
D. O. Farrand, Detroit, private letter, October 6 1882,	18
J. H. Glass, Utica, N. Y., Medic. Record, May 12, 1883, (9) private letter, March 22, 1893, (231),	240
W. H. Duckeman, Olean, N. Y., Med. Record, June 25, 1883, letter August 11, 1883,	7
Robert Newman, N. Y., New Engl. Medic. Monthly, August, 1885; Jour. Amer. Med. Assoc. September 24, 1887; Trans. Amer. Elect. Therap. Assoc., 1892,	300
A. F. Sampson, Galveston, Texas, letter Nov. 28, 1888, Texas State Med. Assoc., (low estimate),	8
W. F. Hutchinson, Providence, September 28, 1882, N. E. Med. Monthly, December, 1886; TIMES AND REGISTER, January 21, 1893,	39
G. W. Overall, Memphis, Missip. Vall. Medic. Mo. 1886 and 1887, vol. III, 1883, (9) letter (141),	150
W. T. Belfield, Chicago, South. Clinic, July, 1886; Jour. Amer. Med. Assoc., April 24, 1886,	37
Geo. H. Rohe, Baltimore, Maryland Med. Jour., November 20, 1886; letter of March 15th states that his statistics are not accessible at this time,	
David Prince, Jacksonville, Ill., letter November 29, 1888; transact. Illinois State Medic. Soc.	
P. J. Hayes, Brit. Med. Journ., July 17, 1886,	
F. F. Dickman, Fort Scott, Kas., Kansas City Med. Record, May, 1889,	
Stevenson and Bruce Clarke, London Record, May 25, 1886; Brit. Med. Journ., June 23, 1887; Brit. Med. Journ., November 27, 1886, (estimate low),	50
Bruce Clark, Brit. Med. Journ., Sept. 19, 1885.	
C. A. Bryce, Richmond, South. Clinic, July, 1886, letter March 11, 1893,	50

L. Wolff, Philadelphia, N. Y. Medic. Press, Feb. 1887, ... 3
Edw. Morton, London, Brit. Med. Journ., October 1, 1887, ...
Edw. S. Smith, The Chironian, N. Y., April 12, 1887, verbal report, ... 3
J. B. Green, Mishawaka, Ind., private communications and TIMES AND REGISTER, January 21, 1893, ... 170
Chambers, Rennold & Rohe, Baltimore, Phila. Medic. Times, June 1, 1888 . . . . . .
R. W. St. Clair, Brooklyn, letter April 10, 1888, in five years, ... 100
G. W. D. Patterson, Atlanta, Ga., letter May 23, 1888, and March 15, 1893, ... 7
E. N. Chestaine, Hume, Mo., letter May 28, 1888, ...
J. J. Berry, Portsmouth, South. Med. Record, Sept. 13, 1888, letter March 14, 1893, . . . 5
Semeleder, Mexico, Wiener Klinik, October, 1888 4
Swinford Edwards, Med. Pres. and Circul., April 11, 1888, ... 24
E. L. Stephens, Nashville, letter January 16, 1888, and verbal communication, (estimate), 30
W. S. Tremain, Buffalo, Phil. Medic. Register, Jan. 12, 1889, and letter Feb. 5, 1889, no figure received, ...
W. H. Walling, Phila., New Eng. Med. Monthly, July 15, 1889, and others, ...
John Fearn, Jour. Electr. Therap., December, 1891 2
W. H. King, N. Y., private communication, March 14, 1893, 51 cases out of 54 51
F. S. Crossfield, Hartford, TIMES AND REGISTER, January 21, 1893, ... 100
Foveau de Cournellis, Paris, Journ. Amer. Med. Assoc., February 27, 1892, ...
Arthur S. Wolff, Brownsville, Texas, letter, February 3, 1893, ... 29
W. C. Wile, Danbury, Conn., Journ. Elect. Therap., January, 1891, and letter March 11, 1893, ... 20
S. Waterman, N. Y., letter, March 10, 1893, 11
H. C. Bennett, Lima, Ohio, letter, March 11, 1893, ... 3
F. H. Wallace, Boston, TIMES AND REGISTER, January 21, 1893, and letter, March 15, 1893, 25
Wm. R. D. Blackwood, Philadelphia, letter, March 16, 1893, no figures stated, ...
Chas. G. Cannaday, Roanoke, Va., TIMES AND REGISTER, January 21, 1893 . . . . . .
O. S. Phelps, N. Y., TIMES AND REGISTER, January 21, 1893, ... 5
Chas. R. Dickson, Toronto, Ont., no report, .
J. H. Kellogg, Battle Creek, letter, February 9, 1888, ...
R. J. Nunn, Savannah, TIMES AND REGISTER, January 21, 1893, ...
C. P. Thayer, Boston, letter, December 9, 1889,
Chas. Dake, Hot Springs, Ark., letter and verbal report, ...
A. T. Douglas, New London, letter, March 14, 1893, ... 6
A. R. Booth, Shreveport, La., letter, January 9, 1888, ...
W. F. Robinson, Albany, letter, March 14, 1893, 5
George C. Pitzer, St. Louis, Mo., letter, March 12, 1893, cases all recorded, ... 210
Robert Reyburn, Washington, D. C., letter, March 19, 1893 4

These statistics contain 1755 cases, which have been compiled from records published in medical journals and from direct communications by the operators, whose letters as documentary evidence are in possession of the writer. The estimate is below the real number, and even when successes have been known, the number of cases has been omitted in these tables, where operators neglected to report and state their cases in figures. Having thus stated the facts connected with the statistics, and the tables so representing a very large number of successes, notwithstanding that the real number would be far larger than recorded, it must also be taken into consideration that many operators do not report their cases, which, therefore, are not known, nor accessible. Neither have all reported cases been included in these tables, and this compilation has been made only from resources accessible or known to me through correspondence. Nevertheless the number reported represents a very large one and, shows that this mode of treatment is practiced successfully by many practitioners all over the world, but mostly in the United States and England.

Some gentlemen have attempted to employ this treatment in a reckless manner, not, some of them, even being qualified or not having selected the proper instruments. It is a wonder that not more failures have been the result of such an evil. If an operator uses twenty-five milliamperes, and is successful, it is an accident, and not due to his care. According to circumstances, variations from rules may be employed, but such are exceptions, and can only be admitted as exceptions and indicated by unusual causes.

In the main, the author's rules, formerly enumerated, still hold good, of which the following are the most important: Expertness as a genito-urinary surgeon and electrician; the utmost patience and gentle manipulations; correct diagnosis; using a galvanic battery, the negative pole to stricture, good electrodes, weak currents of three to five milliamperes, long intervals, never operating during the stage of acute inflammation.

It is also well to bear in mind that electrolysis is *not* a cauterization, nor a burning process, neither a dilatation. On the

contrary, burning and pressure must be avoided. Electrolysis is merely an electro-chemical process, which acts as an absorbent, and to such qualities we owe our success in its employment in the treatment of strictures.

ELECTRODES.—Only a few words about these instruments. After an experience and steady practice of nearly a quarter century, the writer has no reason to change or improve his electrodes. The instrument must be firm, made in one piece, without any joints or screws, must have a certain stiffness in order to be guided with certainty to its course by the manipulator's hand. The bulb must be either egg or acorn shaped, so that the belly of the bulb touches equally the walls of the urethra constituting the stricture, thereby exercising the absorbent power of electricity equally all around the strictured part. Instruments conical at the end have a wrong construction, and such an end will stand so loose in the urethra that the electricity cannot exert its power, in which case a pressure equal to dilatation is necessary, that the egg-shaped bulb will exert the influence of the electricity enlarging the calibre of the urethra. Hence the right shape of the instrument, guided correctly by the operator, will enlarge the stricture by absorption and not by simple dilatation.

The tunneled, as also the combination electrodes devised by the writer, are valuable additions in certain bad cases, in which the pathological condition have altered the anatomical topography of the urethra. Their careful use makes false passages an impossibility and a thing of the past.

The modus operandi has been detailed in former articles, and again in THE TIMES AND REGISTER of January 21st, 1893, particularly vividly and clearly described by Dr. W. F. Hutchinson, on page 44.

To my friends who have kindly furnished statistics, I tender sincere thanks. Such a large number of reliable successes cannot be impaired by a few negatives. And what does the moon care, if some stray dog barks at his brilliancy during a lonely night?

Electrolysis has also been used with success in surgery, dermatology and gynecology, particularly in the following: Aneurism, varicocele, hydrocele, nævi and port wine marks, erectile tumors, ganglions, epilation, ranula, hernia, hemorrhoids, goitre, tumors, obstruction of eustachian tube and deafness, pseudo-membranous laryngitis, malignant tumors, removal of the callus, opacity of the cornea, granular lids, lachrymal obstructions, bedsores, enlarged prostate, fistula, nasal ducts, strictures of the œsophagus, female urethra and rectum, warts, atresia of the uterine canal, chronic cervical catarrh, dysmenorrhœa, extra-uterine pregnancy, metritis, cellulitis and peritoneal adhesions, growths of the vulva, uterine fibroids, peri-uterine hæmatocele, subinvolution, hyperplasia and stenosis of the uterus, salpingitis, oophoritis. The field is too large, and the space allowed too small, to enter into details of cases or subjects mentioned above.

The writer has treated many cases not published, but has reported particularly some experience in carcinoma and stricture of the rectum. Those reports can now be confirmed. Cases of rectal stricture treated six years ago and reported as cured, are well to-day, without having suffered relapse; one of these had been diagnosticated by surgeons of high repute as carcinoma of rectum. Some hopeless cases of carcinoma were treated, with the perfect understanding that only relief and allaying of pain could be expected, in order to prolong life. Nevertheless, those patients are still alive after two years, and are in a better state than before treatment. Treatises on these subjects with reference to electrolysis would fill a volume, and further reports must be postponed for other occasions.

NEW YORK, 68 West 36th Street.

ELECTRICITY IN THE TREATMENT OF URETHRAL STRICTURES.

BY G. HOWARD McFADDEN, M. D.,

[Former House Surgeon and now Visiting Physician to Hackensack Hospital.]

SINCE 1888, I have seen and assisted Dr. Robert Newman in his treatment of strictures of urethra and rectum, in the Hackensack Hospital, and a number of cases in private practice. I have made use of the instruction furnished by him with success. The advantages of electrolysis in the treatment of urethral stric-

tures are that the patient may pursue his usual occupation without any discomfort or annoyance, with the exception of the time in going and coming from his physician's office, and after electrolysis there is that sensation that something has been done; patient urinates more freely and without that spasmodic contraction and dribbling of urine. I have just recently treated a case of stricture,that had cut by a prominent genito-urinary specialist in New York City. I was sent for in the night; patient had a severe chill, and gave me the following history: Had an attack of gonorrhœa one year ago; it did not succumb to treatment, but constantly had a slight gleety discharge; was advised to consult this specialist, who examined him and said he had two strictures, and that they would have to be cut; the operation was then performed, there was a profuse hemorrhage, and patient was advised to go home and report the following day.

I was called in the same night after the chill; patient's temperature was 103½°, and complained of a fullness and pain over the region of bladder and in penis; could not urinate. I passed a No. 20 Fr. catheter with considerable pain, and drew off about a pint and a half of urine with a quantity of clotted blood, and gave an anodyne; and a mixture of potass. citrat., tr. hyoscyam., etc.; kept patient in bed. Next day he was somewhat easier, temp. 101°, and still complained of considerable pain in penis, which was very much swollen; had passed about seven ounces of urine slightly tinged with blood. I then prescribed benzoinol as a soothing injection. This case is now under treatment by electrolysis, and I merely mention it first to show how much better electrolysis is than cutting.

I will now report a few cases that I have kept under observation for some time, and examined and re-examined, thereby ascertaining that no relapse had taken place, if patients had been discharged as cured. The advantages of electrolysis may be had by referring to page 21 of Dr. Newman's "Twenty Years' Retrospect in the Treatment of Urethral-Strictures by Electrolysis."

The rules set down by the author in the same pamphlet must be strictly observed if one wishes to be successful in the operation.

In these cases the diagnoses were correctly made and verified by the most trustworthy practitioners, who had sent the patients to the hospital. In some cases the patients had been under treatment by other methods which had not proved successful. It is a mistake to think that electrolysis was used so that it cauterized or burnt in any way. The rule must be observed, that only an absorption takes place without overstimulating the parts, weak currents, long intervals, never causing pain, careful handling of instruments without pressure or force. Pain, acute symptoms, etc., must be abated before electrolysis can be used.

Here are several cases with their histories :

Case I.—F. S. B., age 23, single, February 13, 1888. Has discharged from the urethra for the past year after a urethritis which has not yielded to treatment. Has been under the care of an excellent well-known practitioner for stricture who sent him to the hospital for treatment by electrolysis. Patient very nervous and sensitive.

Examination. Bougie á boule meets with a thickening of the walls of the urethra and a stricture at five inches from the meatus. There was some discharge from the urethra for which an injection was ordered.

February 20. Urethra improved, scarcely any discharge, but it is evident that the injection has no influence on the stricture. Mitchell's bougies of thallin were ordered.

February 24. Urethra improved, electrolysis was used with a No. 21 Fr. acorn bulb straight electrode (Dr. Newman's acorn set vide, page, "Twenty Year's Retrospect") as a negative in the urethra and the positive sponge electrode in right hand. Three and one-half milliampers were used for five minutes,during which time the electrode passed its whole length of six inches and through the stricture.

February 29. Patient felt better, is easier and the urine flows in a larger stream. Bougies of thallin continued.

March 6. Electrolysis. No. 23, Fr. egg shaped, for seven minutes with a

current of three milliamperes, passed in bladder.

March 23. Electrolysis. No. 25 Fr. egg shape passed easily into bladder. No discharge.

April 3. Electrolysis. No. 27 Fr. egg shaped passed easily into bladder. Three milliamperes.

April 12. Electrolysis. No. 28 Fr. egg shaped, with a current of four milliamperes, passed easily into bladder.

May 1. Electrolysis. No. 28 Fr. egg shaped passed easily into the bladder with a current of three milliamperes. Patient discharged, cured.

Patient has been kept under observation for four years, has not had a relapse and on examination found that a steel sound, No. 28 French, passes easily into bladder without detecting any stricture.

Case II.—May 26, 1888. A. Z. J., aged 24, single, patient has had an urethritis for nine months and is still discharging with frequent micturitions, passing blood and great pain. A sound has been introduced but once. Small stream has been noticed and a stricture found. Bougie á boule on examination meets inflammatory contractions all sub-acute which are sensitive to the touch. Strictures were found at three and five inches from meatus. Urethra was very sensitive and for this reason electrolysis was not used. Mild injections were ordered and potass citrat, etc., to render urine alkaline and later Mitchell's bougies of thallin.

June 18. Patient feels better, but there are still acute symptoms. Urethra is very sensitive and bleeds on the slightest touch of a sound or electrode, therefore electrolysis is contra-indicated.

April 8, 1889. Patient has not been seen since last June, discharges only a very little and no acute symptoms. Stricture is worse. At the hospital electrolysis was used with a No. 14 French egg shaped electrode which passed only to six inches.

April 15. Filiform guide was introduced and after some manipulations passed into bladder. Over this a No. 9 French tunneled electrode was passed with a current of four milliamperes, slowly through both strictures and was arrested at seven inches.

May 6. Electrolysis. No. 17 French passed only to seven inches, and was there stopped.

May 25. Electrolysis. No. 17 French passed only to seven inches, three milliamperes.

June 22. Electrolysis. No. 20 French acorn bulb passed to seven inches from meatus with three and one-half milliamperes.

June 30 Electrolysis. No. 21 French acorn bulb passed its whole length six inches.

July 15. Electrolysis. Filiform guide No. 9 French combination and tunneled passed for the first time into the bladder, which was not attempted before on account of the severe spasm of the bladder. The small size No. 9 had been selected in order to pass the instrument into the bladder, which would have been impossible to do with a larger instrument.

July 22. Electrolysis. No. 20 French acorn bulb, passed its whole length, six and one-half inches.

August 20. Electrolysis. No. 21 French egg-shaped, passed easily into bladder with a current of four milliamperes.

September 2. Electrolysis. No. 23 French egg-shaped, passes slowly through stricture with a current of four milliamperes.

September 15. Electrolysis. No. 25 French egg shaped, passed easily into bladder with a current of four milliamperes.

September 22. Electrolysis. No. 26 French egg-shaped, passed into bladder with a current of four milliamperes. This was a very severe case in which, at times, scarcely a filiform guide would pass, and the treatment's progress was impeded by the patient's irregularity in having electrolysis used. Patient has been kept under observation and has been re-examined several times, and no relapse has taken place.

Case III. Impassable Stricture.—B. C., aged thirty-seven, single. Has a very severe stricture; dates back seven years; very small stream, at times urine only flows after severe straining; hemorrhage from urethra; urine always scalding; cystitis causes severe painful spasm. The whole mucous lining of urethra is much congested, and granulations with erosions. No instrument will pass further than five and one-half inches where

the stricture is hard, almost cartilaginous, and not even a filiform guide will pass. There is a profuse hemorrhage from this place on the slightest touch with a bougie á boule, and even with a filiform guide. He has been treated by local applications, per endoscope, for the granulations and to allay the hemorrhage. During October, 1892, he had an attack of malaria to such a degree that he had to remain at home and in bed. The meanwhile the stricture was impassable and urine dribbled only under severe straining, and cystitis with spasms. Local applications by means of Mitchell's soluble gelatine bougies were used during November and December, 1892.

December 27. Filiform guide passed into bladder for the first time, over which a tunneled combination electrode No. 9 French, passed into the bladder. Urine was drawn off and bladder washed out with a solution of acid boracic.

January 4, 1893. Filiform guide in bladder over which a tunneled combination electrode No. 11 French egg shaped electrolysis four milliamperes, nine minutes passed slowly through the stricture into the bladder.

January 10. Electrolysis. No. 12 French combination electrode tunneled over a filiform guide with five milliamperes passed into bladder in five minutes.

January 16. Electrolysis. No. 14 French combination passed into bladder with four milliamperes in ten minutes.

January 23. Electrolysis. No. 17 French egg shaped passed slowly into the bladder with a current of four milliamperes for ten minutes.

January 30. Electrolysis. No. 20 French egg shaped passed into bladder five milliamperes, ten minutes.

February 8. Electrolysis. No. 21 French egg shaped four milliamperes, nine minutes passed into bladder.

February 15. Electrolysis. No. 23 French egg shaped passed into bladder five milliamperes, ten minutes.

February 24. Electrolysis. No. 24 French egg shaped passed into bladder five milliamperes, nine minutes This case is still under observation and I may report it later on, but consider it the most severe case that electrolysis could have; as it was impassable and urethrotomy seemed to be the only possible cure. But electrolysis accomplished it without any bad result, or any interference with the patient's usual occupation. I have assisted in several operations for stricture of the rectum and enlarged prostate, by means of electrolysis, with very favorable results.

286 MAIN ST., HACKENSACK, N. J.

ELECTRO-RECTAL SURGERY.

BY HOMER C. BENNETT, M. D.,
LIMA, OHIO.

I HAVE used negative galvanic electricity in the treatment of a number of cases of cervical stenosis, and urethral stricture, with very satisfactory results, but at present have no tabulated record of them prepared. I consider this method of treatment the one *par excellence.*

I desire to present the record and history of one case in particular, that I am now treating for rectal stricture, by means of electrolysis.

I append the patient's and family history as it may be of interest to some who are investigating the subjects of heredity and the intermarriage of relatives.

Patient's maternal grandfather and grandmother were first cousins, and had an idiotic daughter, now living, aged seventy.

Patient's maternal aunt also married her first cousin, and she has two scrofulous children.

Patient's paternal cousin died of consumption; patient's paternal cousin died of white swelling; patient's paternal cousin now has white swelling; patient's father died of dropsy, aged sixty-three years; patient's mother died of rectal trouble, aged forty-nine years; patient's brothers had no children; patient's sisters, two of them had twelve children, none of whom have had any diathetic disease. Patient is one of a family of nine children, two of whom died in infancy of some disease of childhood. One brother died in army, another brother had throat trouble for several years prior to his death five months after an attack of la grippe. Another brother has some heart disease.

Another brother, a physician, died last year, aged forty-three years. He had fistula and rectal trouble for three years before his death, which was due to lung and spinal trouble, six months after an attack of la grippe.

One sister living is well, and another sister living has had a cough and expectoration for years, as had also a maternal great aunt, now dead. Patient, Mrs. Belle W., blonde, aged forty-two, nullipara, married fourteen years, husband healthy. Had a vaginal discharge for two years, prior to her present rectal trouble, which began eight years ago. Was always constipated. Has used local applications of almost everything, injections, suppositories, and internal medicines.

Five years ago was treated with slow dilatation by bougies for five months. Three years ago had ten applications of electricity in three weeks, with about a four-eighth inch electrode negative in rectum. General health, aside from local trouble, is good. First came to me Dec. 5, 1892, and on examination I found uterus and vagina normal, save a recto-vaginal fistula, with vaginal opening just inside the fourchette. Fistula extends up and back, through upper part of perineal body, about an inch and a quarter, and opens below a rectal stricture an inch in width. Also, on left side, an ischio-rectal fistula opening below the rectal stricture internally, and externally just outside the sphincter, thence again running back, under the skin, for an inch and a half, and opening about the tip of the coccyx.

On left side also found two firm tumors size of finger tip, the remains of hemorrhoids that her M.D. brother had injected several years ago, and which I have since removed by electrolysis.

The rectal stricture was two and a half inches from the anus, pyramidal in shape, completely circling the gut, an inch in width at base, and a firm narrow top. Numerous ulcers, painful and discharging muco-pus and blood.

TREATMENT.

I apply the positive pole of the direct constant incandescent light current to the abdomen, by means of a Johnson spiral spring disc electrode, eight inches in diameter, covered with absorbent cotton wet in hot water, and an insulated olive tip metal electrode in rectum. The figures given below are in eighths of an inch in diameter.

Dec. 5, 1892.	Passed	5/8	tip in	5	min. strength	15	ma.
" 8,	"	5/8	"	3	" "	15	"
" 12,	"	5/8	"	1	" "	15	"
" 15,	"	6/8	"	4	" "	15	"
" 19,	"	6/8	"	2	" "	25	"
Also negative electrolysis one hemorrhoid						8	"
Dec. 22,	Passed	6/8	tip in	1	min. strength	15	"
Jan. 9, 1893.	"	7/8	"	25	" "	20	"
" 13,	"	7/8	"	10	" "	20	"
" 19,	"	7/8	"	4	" "	20	"
" 24,	"	7/8	"	2	" "	20	"
" 30,	"	7/8	"	1	" "	20	"
Also negative electrolysis other hemorrhoid						8	"
Feb. 3, 1893.	Passed	7/8	tip in	1/2	min. strength	20	"
" 3,	"	8/8	"	18	" "	20	"
" 7,	"	8/8	"	11	" "	20	"
" 11,	"	8/8	"	9	" "	20	"
" 15,	"	8/8	"	2	" "	20	"
" 20,	"	8/8	"	1	" "	20	"
" 20,	"	9/8	"	13	" "	20	"
" 27,	"	9/8	"	5	" "	20	"
Mch. 3,	"	9/8	"	4	" "	20	"
" 7,	"	9/8	"	3	" "	20	"
" 11,	"	9/8	"	2	" "	20	"
" 16,	"	9/8	"	1	" "	20	"
" 16,	"	10/8	"	10	" "	20	"

This is as far as I have gone at present, but I shall continue using the 10-8 inch tip, and until it passes easily, and then discontinue, as that will be as large as the sphincter will accommodate, and will probably be large enough. I insert a cocaine compound suppository before each treatment, and exert steady constant pressure without force until the tip passes, then push it up as far as it will go, and use a current with interruptions of from one to sixteen to the second, from five milliamperes to twenty milliamperes strength, for five to ten minutes to stimulate the involuntary muscles of the bowel. Then stop the interruptions and again pass the stricture backwards with the original ampereage, and withdraw with current shut off entirely. I am injecting the fistulæ with peroxide of hydrogen and iodine, and they are gradually closing up; and if that plan of treatment does not close them up entirely in time I will operate on them, although the patient is averse to any operation, after the stricture is removed.

I have been tedious in the details, but it is the little things that make success, and success is not a little thing.

8 Boone Block, 114½ W. Market St.

ELECTROLYSIS.—POPULARLY PUT FOR THE GENERAL PRACTITIONER.

By J. MOUNT BLEYER, M. D.,

[Medical Editor Electrical Review, Visiting Laryngologist to German West-Side Dispensary, etc.]

MUCH has been written by our scientists and electro-therapeutists on electrolysis but they invaribly failed to put it in such a form that the average practitioner, who also is willing to learn this important question, that I am prompted by this special, to avail myself of the opportunity and explain what really electrolysis means, without being scientific in my expressions, and still not deviating therefrom.

What do we mean by the term electrolysis? It is the decomposition of a chemical compound called the *electrolyte*, into its constituent parts by an electric current.

Let us follow up this closely. We observe that in the galvanic battery a chemical re-action takes place and the result is the production of an electric current. If conversely, we place in a decomposable liquid, two conducting bodies, and thus enable a current of electricity to pass through the liquid, we shall find that the result is a chemical decomposition. This decomposition by means of the electric current is called electrolysis; the liquid decomposed is known as an electrolyte, and the two conducting bodies are termed electrodes. In a galvanic cell, a definite amount of chemical action evolves a current, and transfers a certain quantity of electricity through the circuit: So conversely a definite quanity of electricity in passing through an electrolytic cell, will perform a definite amount of chemical work. An electrolytic cell is, therefore the converse of a voltaic cell.

The discovery of the decomposing effects of the electric current was made by accident and followed almost immediately after the invention of Volta's pile.

Nicholson and Anthony Carlisle constructed a pile on the plan of Volta's, using a silver half-crown piece, alternated with equal disks of copper and cloth, soaked in a weak solution of common salt. It so happened that a drop of water was used to make good the contact of the conducting wire with a plate to which the electricity was to be transmitted. In noticing this, Carlisle observed a disengagement of gas from the water, and Nicholson recognized the "odor of hydrogen" coming from it. They at once took measures to determine the cause of this singular effect, and using the first materials at hand, filled a piece of glass tube with water, plugging both ends with cork and inserting through each cork a piece of brass wire. When the wires were put in communication with opposite ends of the pile, bubbles of gas were evolved from the point of the wire by which the current left the tube, and the end of the wire by which the current entered became tarnished. The gas evolved appeared on examination to be hydrogen, and the tarnish was found to proceed from the oxidation of the entrance or positive wire. In order to prevent this oxidation of the material of the wire itself, another apparatus was made, in which platinum wires were used. Then gas was evolved from both wires, and this ascending through the water, was collected separately in two tubes. The contents of the tubes being examined, hydrogen was found in one and oxygen in the other, the two gases being almost exactly in the proportions known to constitute water.

In this way the decomposing power of the electric current was established very shortly after the first knowlege of Volta's invention. Of course, experiments so remarkable attracted the attention of other investigators. We find Cruikshank decomposed a variety of compound substances, and found, that, as a consequence of decomposition, the acids and oxygen always collected around the positive wire, by which the current came in; and hydrogen, metals, and the alkalies, around the negative wire, by which the current went out. Meanwhile, Ritter, of Jena, had also independently discovered the electro-decomposition of water and saline compounds, etc. Humphrey Davy, in 1800, began his famous experiments, which stand, and will stand forever as the foundation of a great branch of electrical science. Reference regarding them must be looked for in physics. Faraday, in 1834, established certain laws of electro-chemistry. He found that the amount of chemical action in a cell is always proportional to the quantity of electricity

passing through it; and that the quantities of substances dissolved and set free by electrolysis are in definite proportions by weight, and these proportions are identical with the ordinary chemical equivalents of the substances. From the first Faradic we know that a current of a certain strength will always liberate just so much hydrogen, for example, from water, and will cause the solution of just so much zinc in the cell whence the current is derived.

It is hoped that electrolysis herein thus explained is made intelligible. Space does not admit of detail description, otherwise I should have been still more explicit.

NEW YORK CITY.

ELECTROLYSIS.

BY F. H WALLACE, M. D.

BOSTON, MASS.

THE passage of the galvanic current through living tissues is capable of setting up remarkable changes in pathological growths, as well as in the normal tissue, and as a result we possess one of the most potent drugs in all the materia medica, if I may be allowed to call this unknown force a drug.

The two poles, positive and negative, are for practical purposes opposite in their effects, or where we wish to obtain resolutive effects we use the negative, and if we wish hemostatic results we use the positive. For the removal of superfluous hair, moles, warts, worms, or excrescences on the skin, uterine fibroids, strictures of rectum, urethra or œsophagus, atrophies and numerous other conditions where a nutritional effect is desired, we use the negative pole.

For naevi, port-wine stains, dilatation of the capillaries on any part of the skin, the menorrhagic conditions from whatever cause, the hyperæmic condition of abscesses, and other conditions which will suggest themselves to the reader, if he will think of the positive pole as one of hemostatic quality, can be cured or alleviated by the use of the same.

The use of electrolysis in removing moles, hairs, etc., I find successful, and, with care, no scarring need be produced. We have as yet no needle for removal of hairs which will follow the sinuosity of all hairs, so that none will return after removal; and it becomes a question of hitting, by the sense of touch, the hair-bulb, but where the hairs are straight, or nearly so, I find the irido-platinum needle to answer all that can be required of any instrument. For the removal of moles, any needle or instrument that will allow the concentration of current directly on the site of the growth will answer, and thus, as in strictures, I have found much better results from mild currents for a comparatively long sitting, than a short sitting with strong current, and those not too frequently repeated. In many of the heretofore discouraging gynecological cases, I find electricity the remedy par excellence; leucorrhœa and many cases of pelvic exudates, for which, in former times, we had to use iodine, packing with cotton, etc., to relieve. The most brilliant result reported by eminent specialists in the treatment of fibroids, is of itself alone a sufficient guarantee that electricity has come to take the place of the knife, in these heretofore discouraging cases; and to it we may look with confidence to restore our patients to that "sound and pristine health" from which, for some unexplainable reason, they had deviated.

ELECTROLYSIS WITH LOW TENSION CURRENTS.

BY ROBT. L WATKINS, M. D.,

NEW YORK.

IN an article written by the author in 1890, it was declared that the reduction of tumors should be accomplished by a much lower tension current than is commonly used, and that in thus performing these operations there was less pain produced than with a high tension current, with the same results.

The above was found out by using low tension secondary batteries for this purpose, and not by first formulating the above declaration and working from that. In other words it was the result of practical experiments. In order to accomplish this electrolysis, one or two ordinary storage batteries are used and connected in series, thus obtaining four volts when the two are in use together.

Second, the wires should be large, about the size of ordinary telegraph wire in the form of flexible cords.

Third, the needle electrodes which are used should be about the diameter of knitting needles and should come to a sudden point. These are fastened to the electrodes in the most convenient way.

Enough electro-motive force to overcome the resistance of the part should be used and no more is necessary. Often one cell or two volts will do this. No milliampere meter is needed at all, for I care not how few milliamperes are used, even though it is below one, as long as I get an electrolytic effect.

That a current is passing can be determined in two ways. First, by putting a telephone in the circuit, then by making and breaking, the circuit current will be heard. The patient also, at the same time, will experience a slight pain. Second, the current can be made and broken without the telephone, and if the pain is experienced, of course a current is passing. I have often used only one cell and obtained good results.

The reason why such large wires are used from the battery is not because a tremendous current is to be carried—yet it has a better chance to travel—but because it is found that better results are obtained with it. There seems to be a peculiar unmeasurable action produced by these large wires which is not obtained with the small.

The needle electrodes, two of which are generally used, are not necessarily to be insulated, though it produces less scar if the positive is so protected. Instead of two needle electrodes, it may be more convenient to have only one, the negative, which is placed in the growth, while the positive may be of metal, or a moistened sponge, placed in the mouth, or on some other mucous membrane.

A slow and painless way of introducing the needles is, to lightly apply them to the surface and gradually, as the electrolysis progresses, the negative needle will work into the growth, with a little pressure continually applied. Then by reversing the current so that the positive becomes the negative, this will then be worked into the tumor. Both the needles being in the tumor, the current can flow fifteen or twenty minutes as required.

Below are given two cases of fibrocystic goitre.

The first was Miss F. L., age 16, first treatment in June 1891, application of two storage cells, the needles introduced just beneath the skin. The next treatment was August 10th, one storage battery was used for three quarters of an hour. August 31st, storage current of one cell; tumor nearly gone. November 14th. used two storage cells, one of which was made from a couple of lead pipes and worked well. The other was a Gibson; passed the current about twenty minutes. Three other applications were made on the same days as in case No. 2 making seven in all.

Case No. 2, a sister of No. 1. November 14th passed a current from two storage cells, one of which was a lead pipe cell; let it go half an hour. A congestion was noticed to extend all around the neck, starting from the poles, even as soon as the current started. January 4th, 1892, another current passed, and again about in March another current was passed.

In both these cases after this the patients failed to appear any more, but about two weeks ago I hunted them up, and found that the tumors had entirely disappeared in one case, and nearly in the other;leaving no appreciable scar and causing no pain. These cases were seen by Dr. Newman before and after they were reduced. Also by Dr. Patterson, who sent them to me.

I made a single application in another case a little over a year ago, a patient about 60 years old. The tumor was much larger than in either of the other cases cited and gave her a great deal of pain. The pain ceased and has not returned since. The tumor was considerably reduced in size and I have no doubt would have entirely disappeared if she had continued the treatment.

ELECTROLYSIS IN STRICTURES.

By W. R. D. BLACKWOOD, M. D.,
PHILADELPHIA.

THE late issue devoted to this subject has evoked such a demand for more information as to call for this additional number, and I have been asked by the editor to contribute something. In the article written by myself in THE TIMES AND REGISTER of January 21st, I have told all that I know about the matter,

consequently I now simply refer to a few questions asked me by correspondents since the date indicated.

First. I am asked, How about recurrence of stricture after electrolysis? Well, in my own cases there have been no relapses so far as I know. Patients may have had that happen and gone elsewhere, but I guess not many have done this. Relapse will happen under any method. Many of my cases were treated prior to coming to me by dilating, cutting, etc., and were pronounced cured by their surgeon. I think relapses are rare under electrolysis.

Second. I am asked if electricity has the power to select a given part of the body which is diseased and act on it alone whilst passing through healthy tissue, and to this I answer YES ; and I am emphatic in saying so because this has been urged as a squelcher by laparotomists, who see nothing but the knife for every real or imaginary difficulty which drops into their clutches. Any man with half enough brains to practice his art knows that drugs have what may be called "selective powers," as, for example, digitalis, ergot, strophanthus, cactina, etc. In tumors the current may pass through perfectly healthy tissue both before and after touching the diseased mass, yet no harm is done, but the tumor is resolved. In endometritis the current passes through the diseased and healthy fundus alike—the inflammatory action is checked and the hypertrophy reduced, yet no harm comes to the normal womb. In varied paralyses galvanism traverses normal tissue doing its work actively—this is not harmed, but the muscle or nerve whose function is in abeyance is urged into activity, the final result being a cure of the disease. So in many other examples which can be named. Of course electricity can do harm to normal tissue if undue currents are employed. So will strychnine do harm when used medicinally if given in toxic doses. There is a maximum in everything not to be exceeded without doing injury, or causing fatality. Electricity will resuscitate a person apparently dead from respiratory failure, if used properly and in time; in a big enough dose it will stop the breathing of any living thing in the thousandth part of a second.

Third. I would not think of employing anything else than the current as a positive curative under any circumstances whatever. Where one bougie will go, any of that size must also pass, I therefore select that which, in addition to its dilating effect, will do the other thing—resolve by electrolysis the fibrous or cartilaginous band causing constriction.

Fourth. I have been asked about epilation under electricity. I have done little for a long time in this direction, because my sight is not as good as it was or ought to be now; the procedure is legitimate, and it does better than depilatories, but it is rather painful to the patient, and very slow if much is to be done. If the growth is not too noticeable on a lady I urge her to let it alone, and if she wont, I send her to a friend who wants to do such work.

Fifth. I don't like currents from street mains, because they are not as readily controlled as those from a battery. If one is anxious for heavy currents for manifold purposes, the secondary (or storage) battery is available, and it is less expensive in the long run, if fed by a Calland primary.

Sixth. If I was commencing practice now, instead of getting toward the other end of my working time, I would use electricity more frequently than I have done in the past, for its usefulness is only being born, so to speak; it will, before long, be used just as freely by all physicians as quinine is now, in its legitimate space; this space is far too circumscribed as yet. I have had most brilliant results in many cases where writers described its use, as, for instance, in brain lesions. Within twenty-four hours past I have seen a gentleman pronounced incurable by several neurologists from brain tumor, and this where operative measures, surgically speaking, were not to be thought of, yet he is now well and in full business activity. Galvanism cured him.

246 North Twentieth Street.

ELECTROLYSIS IN STRICTURE.

By C. A. BRYCE, M. D.,
Richmond, Va.

FOR the last twelve or fourteen years we have devoted much time and attention to both the theory and practice of electrolysis, and in answer to the request of

the accomplished editor of the TIMES AND REGISTER, to give him our experience in this work, we can say that quite a short article will suffice to state our opinions on the efficacy of this method.

In properly selected cases, and with the requisite amount of skill and patience on the part of both the patient and operator, electrolysis will as certainly cure urethral stricture as water will put out fire. This is one side of the proposition. In certain other forms of stricture, and in the hands of the hasty and inexperienced practitioner, this method is not only useless but positively harmful. Some of the most brilliant results that we have ever experienced in urethral work have been through the agency of electrolysis. We recall cases of stricture that had existed for many years, that have been cured by electrolysis in our hands, and now, as many as eight, ten and twelve years have elapsed, without a single symptom of any trouble in this direction.

With this favorable result in our hands it may be wondered at by the reader, when we state that, at this time, we seldom ever think of making use of this safe, certain and painless method of treating stricture of the urethra. Our reasons for not using electricity in this form will explain, to some extent, why so many excellent surgeons do not practice the method and actually deny its efficacy.

To be successful with electrolysis in urethral stricture, as in all other classes of stricture or morbid growths or deposits, one must be thoroughly familiar with the pathological conditions present, and at the same time must understand fully the principles involved in the action of the galvanic current in absorbing morbid tissue. We must carefully avoid exciting inflammation, and should ever bear in mind that we are endeavoring to help nature to perform a purely physiological process. Should we overstep the bounds but a trifle, we will defeat our object and turn a most potent remedy into a cause of harm.

The average practitioner seems to think that the stricture must be *burned out* by the current, while the object of the operator should be to simply cause such decomposition from time to time as will gradually reduce the deposit at the time of using the current and start the absorbents to work, so that between the applications of the current much will have been done independently of the current. Or in other words, the current properly used accomplishes much in the way of absorption *at the time*, and much more work is done by tne absorbents by reason of the stimulation of the galvanic application.

The process is very slow and tedious, and many physicians grow weary of the case before they have made any appreciable progress, and in endeavoring to hurry up matters increase current strength and frequency of applications, and thus insure defeat by bringing on sub-acute inflammation. Even where the physician has the patience necessary, it will be found that the patient will often grow discouraged, and quit the doctor before the method has had a fair chance.

In summing up the possibilities and advantages as well as the disadvantages of electrolysis, we are led to the following conclusions:

1st. In strictures consisting of simple hyperplastic deposits of all degrees, excepting those of dense cicatricial tissue, electrolysis carefully and scientifically used will effect a perfect and permanent cure. But in the treatment of even these selected cases, a very long period of time will be required, the operator must be a thorough master of the science of electricity and, withal, a good physician, and the patient must have a great amount of faith and patience, and considerable money, to make the surgeon consume the necessary time to treat him to a successful termination.

2nd. All of the objections above mentioned being met, it is the best method that can be found for strictures of the above class.

3rd. In strictures of fibrous bands and dense cicatricial tissue it is certainly worthless, and division or divulsion offers a far speedier and more certain method of relief.

506 N. SECOND STREET..

ELECTROLYSIS IN TWO TYPICAL CASES OF FIBROMA.

BY HOLFORD WALKER, M. D.

CASE, No. 1.—Mrs. J. P., age 29. Married nine years, no children. More or less menorrhagia ever since

marriage: unwell every two weeks last three years, period lasting six days, and very profuse; constant severe pain, totally disabling her for her household duties for past two years. Attended by various medical men in the city. Surgical interference advised, but dreaded. Sent to me by Dr. Mavety, and came into my hospital, March 1892. Found uterine myoma size of infant's head, involving the fundus. Remained two months, and continued to come as an externe for the following five weeks. Received applications of from 150, to 225 milliamperes three times weekly. Menstruation became normal and regular; pain completely ceased at end of second week. Tumor steadily reduced in size, patient steadily increasing in weight and improving in health. Reported herself at my office three weeks ago, in the picture of health; had done all her own household work since cessation of treatment: and was pleased to inform me that she was five months advanced in pregnancy, bearing in mind that she had been nine years married, without conception. Weight increased from 103 pounds before treatment, to 135 when she reported.

CASE NO. 2.—N. P., aged twenty-two years, single. Came to my hospital July 1892; her attending physician, Dr. Strange, being confined to his house. The patient suffered from severe and persistent menorrhagia during the previous three or four months, which nothing that was done availed to stop, the discharge would moderate with absolute rest and treatment, but the slightest exertion produced profuse hemorrhage.

Dr. Cameron saw the case with me, we diagnosed uterine myoma, and enlarged tube; and agreed it would be well to try electricity before resorting to surgical interference; as all other means had failed.

Patient received three applications weekly of from fifty to one hundred milliamperes. Menorrhagia ceased entirely after the second application. The regular menstrual period did not recur for three weeks, and only lasted three days. Improvement generally was rapid and marked; remained in the hospital nine weeks; and as an externe for milder current for three weeks, at the end of which time was restored to health: and as a pleasant finale, was married in October last. I have a letter from her reporting, dated February 24, 1893, only complaining of a little indigestion, and stating that when she came to the hospital she weighed only 105 pounds, when she left, 120, and now 133 pounds.

The indigestion can be accounted for when I mention that she has gone to reside under the Stars and Stripes, the land proverbial for PIE.

TORONTO.

Book Notices.

PLAIN TALKS ON ELECTRICITY AND BATTERIES. By Horatio R. Bigelow, M. D. Second edition, revised. 16mo. pp. 85. Philadelphia, P. Blakiston, Son & Co., 1892.

A small, but excellent book, giving good and reliable ideas concerning the mechanism of the prominent batteries. Beyond illustrating the motor-points to a moderate degree and showing Apostoli's method of uterine faradisation, nothing is said as to electro-therapeutics.

HUMAN ANATOMY. A complete systematic treatise by various authors, including a special section on surgical and topographical anatomy. Edited by Henry Morris, M. A., and M. B. Loud. Illustrated by 791 wood cuts, 214 of which are printed in colors from drawings made expressly for this work by special artists. Philaphia. P. Blakiston, Son & Co., 1012 Walnut St. 1893. Cloth, 4to, pp. 1286. Price, $7.50. A new text book for students.

The work is divided into ten sections, each prepared by an author who has devoted special attention to his section. In the illustrations the colors are utilized to aid the student in fixing salient points; for instance, the origins of muscles are shown by red lines, the insertions by blue, and the ligamentous attachments by black. The same colors are employed in the numerous plates illustrating the vessels. The engravings are very finely executed, the descriptions are concise, rather those of a dissector's manual than of a systematic treatise. Altogether the work is excellently suited to its purpose, and in the superiority over its predecessors marks the great progress in bookmaking of the last decade. It is surely notable that a work of this magnitude, so profusely illustrated, can be offered at so small a price.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
MANAGING EDITOR.

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ELECTROLYSIS IN STRICTURES.

So much interest was manifested in our previous "Electrolysis" issue that we requested Dr. Newman to prepare the material for another on the same subject. The material has proved unexpectedly rich and abundant; so that we feel amply justified in the selection of this topic. The statistics accumulated by Dr. Newman, were all reported, would cover a list of over 2000 cases of urethral stricture treated by the electrolytic method. In the face of such a mass of positive evidence, one is tempted to explain the dissent existing by the application of the "personal equation." Still, everyone has his right of opinion and free expression; and if the opponents of this method desire it, the columns of the TIMES AND REGISTER are equally at their service.

As the man who has originated and popularized electrolysis in the treatment of stricture, Dr. Newman has won an abiding place in the annals of American medicine. In spite of the bitterest opposition, he has tenaciously held to his belief and has succeeded in impressing it upon others, as may be seen in the present testimony. Dr. Newman is a native of Germany, whence he was exiled in his early youth, for his part in the revolution of 1848. He came to America with neither friends nor money, and was compelled to earn the means of completing his medical education.

He graduated at the Long Island College Hospital in 1863, and at Bellevue in 1869. In 1863 he went to the front as State's Volunteer Surgeon. In the same year he was appointed physician to the Northern Dispensary.

In 1864 he was appointed by Professor Hutchison, Prosector and Assistant of the Surgical Clinic in the Long Island College Hospital; also physician to the North-Eastern Dispensary, and a Sanitary Inspector in the Council of Hygiene and Public Health.

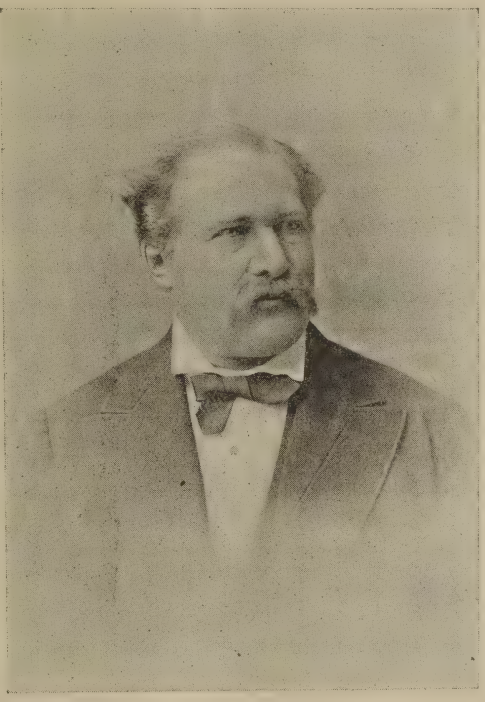
During 1865, he was appointed District Physician to the New York Lying-in Asylum.

When the Metropolitan Board of Health was organized in 1866 he was appointed a Sanitary Inspector. While inspecting an old house in Nassau street, he fell through a trap door, and was injured to such a degree, that he was laid up for six months, and then went to Europe to restore his health.

During the same year he operated successfully in Ovariotomy, and was the *first* who removed the tumor with the galvano caustic battery.

In 1867 Dr. Newman was one of the founders of the Medico-Legal Society and its first Vice President.

The New York Medical State Society appointed him a committee to investigate the result of consanguineous marriages. For two years he corresponded largely with medical men all over the world in order to complete his investigations, and made an elaborate report to the Society at the meeting in 1869. Soon after, he was one of the founders of the Forensic Society, which had only a short life.



DR. ROBERT NEWMAN.

In 1875, he received the appointment of Surgeon of the North-Western Dispensary, which position he has held fourteen years, and performed many operations. Since 1879 he has been Corresponding Secretary of the Alumni Association of Bellevue Hospital Medical College.

Since the organization of the Alumni Association of Long Island College Hospital in 1880, Dr. Newman has been in the Board of Managers and successively its Vice-President, and lastly President.

While the doctor has a preference for surgery, he has made electrolysis his special study, in which branch he is the acknowledged authority.

His contributions to medical literature have been extensive, and by no means confined to electrical topics. The current number of *The Sanitarian* contains a paper of his upon cremation, the importance of which at the present time is manifest.

The doctor is also a member of the Physicians' Mutual Aid Association; Society for the Relief of Widows and Orphans of Medical Men; N. Y. County Medical Association; N. Y. State Medical Association; Society Medical Jurisprudence; N. Y. German Medical Society; Fellow of the American Electro-Therapeutic Association; Honorary Member Berlin Cremation Society; Honorary Member Danbury (Conn.) Medical Society; and he has been appointed Consulting Surgeon, Hackensack Hospital; Consulting Surgeon, Bayonne Hospital; Consulting Physician, Home for Aged and Infirm, Yonkers; Consulting Surgeon, German Dispensary, West Side.

He has contributed to medical literature about fifty articles, and has delivered clinical lectures in Philadelphia.

He has also written a part of the "International System of Electricity," now in press, to be published by F. A. Davis.

Letters to the Editor.

I BELIEVE that it is electrolytic action of the continuous current, that gives us the beneficial results we oftentimes experience in the treatment of nerve lesions, both central and peripheral. Yet the direct action of the current is not so obvious as it is in surgical work. I can readily demonstrate that electrolytic action does go on in the deep seated tissues from surface application of electrodes, though perhaps not to the same degree in the same length of time, owing to the lack of density of the current.

W. J. HERDMAN, M. D.

ANN ARBOR, MICH.

I REGRET exceedingly that pressure of work at this season prevents me from contributing to your interesting number on electrolysis in stricture. Although I have not had enough experince with it to speak with authority, I have tried it in a sufficient number of cases to convince me that the negative pole of the galvanic current has a very decided dilating or relaxing effect in this class of cases. I have at least a dozen times, in the male, been able to introduce, through a tight resilient stricture, by the aid of the negative galvanic current, an olive-shaped metallic bougie a size larger than I had been able to introduce without electricity. In stenosis of the internal os uteri, causing severe dysmenorrhœa, I have had quite a large experience. I have already published nine cases, and since that I have had twelve more. The result has been very satisfactory, it having failed to cure in only one case, in which there was tubal disease, and a relapse having occurred in two others after exposure. So that the majority of the cases have been completely cured. I have, therefore, no hesitation in saying that negative intra uterine galvanism is one of the best remedies we possess for stricture of the uterus.

A. LAPTHORN SMITH, B.A., M.D.

MONTREAL, CAN.

I AM still using electricity in the treatment of strictures of the urethra, but now usually confine the treatment to strictures in the bulbous, membranous or prostatic portion. Strictures in the penile

portion, especially resilient strictures, and also cases which are subject to so-called urethral fever, I prefer to cut.

I also use electricity in endo-cervical metritis, provided there are no pus tubes or other inflammatory troubles in the pelvis. I have, also, had some fine results in the use of the positive pole in the uterus, in cases of hemorrhage attended with myomas or fibroids.

In cases of hysterical ovaries, it frequently acts like a charm.

S. M. HOGAN, M. D.
UNION SPRINGS, ALA.

ELECTROLYSIS IN STRICTURE.

IN response to your courteous and repeated invitation, I will occupy the time of your readers with some unusual experiences with electricity in the treatment of urethral and anal stricture.

I believe them to be unusual, because I have so far not seen or heard reports similar to these, and for the additional reason that the procedures to be detailed are, for the most part, at variance with the teachings of those whom we willingly honor as authorities on electric methods. Perhaps I ought to say that for my success I am much indebted to Dr. Robert Newman, of New York City.

Doubtless some of your correspondents will, as it is well to do, discuss theoretic details; and I will content myself with facts, which I trust may be valuable to some one.

In November, 1886, a gentleman came to me for whom repeated and excessive dilatation had been practiced. Contraction followed until micturition was distressing and his health much impaired.

By ordinary usage I could not introduce a filiform guide; and after much patient effort, I adopted the following, which suggested itself as a solution of my difficulty. Taking a hollow, flexible and tapering bougie, I removed so much of the point as would open the cavity only enough to permit the passage of a filiform guide, and tying the ends of two of these guides together, I passed them down inside the bougie until the distal end was barely concealed within the bougie's point.

I now anesthetized my patient, because of his extreme irritability, and introducing the bougie I tried to engage its point in the stricture. Satisfied with my effort, I pressed the filiform forward and entered the bladder.

Next I withdrew the bougie over the filiform, cutting it off in sections as I withdrew it, so I could be sure of maintaining my guide in the bladder. Lastly I passed a tunneled electrode down over my guide, and my toil was rewarded by electrolytic success. I began with No. 12 French, and four additional seances at intervals of one to two weeks made the cure complete, as it remains to this date.

I used seven to twelve bi-chromate cells, of about one and one-half volts each, but I do not know how many milliamperes, as then I had no means of measuring.

II. On July 18, 1884, a patient who had been under the care of physicians in a neighboring town, was directed to my preceptor after they could no longer relieve the bladder. Let it be said of the latter physician, that while he is an excellent surgeon, he knows little of electricity, nor does he care to. He only asks for sufficient current to carry his instruments through an obstruction.

I will say, also, that he demands very much greater energy than I was taught to apply, or dared to use, until I observed the following cases in my office.

The patient, in his distress, himself used force in trying to pass a catheter and pushed the instrument directly into the rectum. He was thoroughly anesthetized, and introducing a No. 14 French electrode bougie, the current from thirteen to sixteen bi-chromate cells was gradually increased to full intensity. Dr. Hill directed the electrode, while his left index finger in the rectum served to prevent the instrument from passing through the urethral wound into the bowel. Although no sound could be passed, we found less difficulty than we anticipated with the electrode.

After the No. 14 had penetrated the stricture, it was exchanged for No. 17, followed by careful increase of current. Abundant evidence of decomposition was manifest during the operation.

So soon as the chloroform effect had sufficiently subsided the patient went out on the street. He passed, unaided, a good stream of water about an hour after the operation.

No blood was lost in the operation except that a few small clots escaped with gas from the rectum.

The only complication learned of was, that a few days after returning home to a neighboring village, he had an orchitis; which was treated by the local physician, and the man remains well to this date. The rectal wound also healed promptly.

III. In the autumn of 1891, a man was standing upon a mowing machine in his barn, and reaching above him for some article hanging there, fell astride of the seat-bar of the machine. Severe inflammation followed, which fairly subsided, but after some months almost complete stricture resulted from this injury. The urine could only be voided by drops. Absolutely *no* stream at *any* time. In the perineal space could be felt an induration about three fourths of an inch long and its diaameter included the urethra. This man also came to my preceptor, Dr. Hill, expecting only the knife, but instead was brought to my office. After a ten per cent. solution of cocaine had been applied to the sensitive urethra, a No. 16 F. was introduced, and a current from forty McIntosh-Laclede cells was used, by rheostat, the milliammeter registering as high as 25 mm. This current could not be maintained long enough for our purpose, and we resorted to the bi-chromate, after freshly filling the cells above the customary charging line, so that there would be about two volts per cell. At the highest fifteen of these cells were used, and although considerable pain and hemorrhage accompanied the work, a free entry to the bladder was made. A severe chill and fever followed next day, but as he had been having slight chills, we were in doubt whether the severer manifestations were more than exaggerations of a previous condition.

The satisfactory features are that the stricture and induration disappeared and he made a good recovery with one seance. I should not omit to say that after the No. 16 had passed, No. 20 was substituted. I saw the patient the fifth of this month—March, '93—and he says he is well.

IV. Traumatic Stricture: Almost a duplicate of No. 3, except produced by falling in a hasty attempt to cross a fence. Treatment given March, 1884. Result: A permanent cure by one treatment as in the former cases.

While my practice has been, and is, to use the milder currents, what I have here stated shows what may safely be done if heroic treatment is demanded.

V. A lady, aged about forty. She had been treated for hemorrhoids by the hypodermic method. The statement was that a large ulcer formed in the site of one of the tumors, and extensive induration supervened—so extensive as to involve the entire circumference of the bowel and constrict it. On October 19th, 1887, she was brought to me, after having consulted several who were greatly my superiors in years, and in knowledge also. The diagnosis was cancer.

I felt compelled to dissent from this, though for reasons just stated, I did so with some hesitation.

Only fluid stools could be voided, and the largest diameter which could pass the stricture was five-sixteenths inch. I had a set of olive electrodes made, grading from one-half inch to one inch in diameter.

Under anesthesia I succeeded in passing a one-half inch olive.

Three days later I passed, with cocaine anesthesia, an olive of 9-16 inch diameter, then, resting a week waiting developments, I found encouragement to proceed. One or two seances per week, as I could be permitted, were given until in all she received twenty treatments, and an electrode one inch in diameter would pass without electric aid.

Ten to fifteen mm. was the usual strength of current. It was noticeable during treatment that, in conjunction with reduction of the stricture, the surrounding induration was disappearing; the tissues putting on a healthy hue and defecation closely approximating the normal act.

Though more than five years have passed she is still in health, with no return of the anal affection.

S. T. Anderson, M. D.

I GLADLY give the results of my experience with electrolysis, so far as relates to the treatment of organic stricture of the male urethra. I have treated some twelve or fifteen cases. In

all, where I had complete control of the patient, I discharged him cured in from one month to eight months. In one case I could not introduce the whalebone filiform bougie, and complicated by abscess posterior to stricture, three and one-half inches from meatus, with fistulous opening, permitting urine to pass. Pus was passing through the meatus and false passage. This case lingered eight months on hand, owing to the inflammation extending to the urethra anterior to stricture, and great care and long intervals between the uses of the electrolytic current were necessary to avoid undue irritation.

I have used the current in primary or initial treatment as long as twenty-eight and one-half minutes before passing a stricture of about one and one-half inches in length ; the subsequent treatments being of short duration, not over two minutes on an average for one stricture.

Some cases have left relieved before I discharged; these have generally been cases where the final fee has remained unpaid, and I have lost sight of the subjects.

I have removed moles from my own face and body, and from ladies' faces, principally of patients well known to me, leaving no scar after the lapse of a few months.

I also removed two soft corns from the feet of my wife, using a current of ten cells of a battery (Galvano-Faradic Co.) until the corn was perfectly white. These turned black in forty-eight hours, and in the course of a week a dry, hard plug dropped out, which healed up (the cavity) perfectly smooth.

I treated a benign tumor on the outer canthus of a young gentleman's eye. It was growing rapidly when I took the case in charge. It had been about six months since first noticed. Physicians had informed him that either the knife or an escharotic would be necessary. This I removed with four applications of current about one week apart; healed perfectly, leaving no scar. Of course it is understood that I used the needle or other operative electrode with the negative current, and followed other necessary details as to strength of current, length of application, and frequency, as my judgment directed.

Having removed here from Atlanta nearly three years ago, I have not had any additional cases, nor used the new current centrollers nor rheostats and other improved methods for controlling and regulating strength and intensity of high currents.

I would state that I am an eclectic physician, and trust the day will come when all schools will find it absolutely necessary to have a chair of electrical therapeutics, and students be required to pass examination in the same. I find the current invaluable in my practice, and believe it supplies and fills a long-felt want in the treatment of many diseases.

G. W. D. PATTERSON, M. D.
DEMOREST, GA.

IN answer to circular received, asking for my experience in treating stricture of the male urethra by electrolysis, I would say that my experience has been quite extensive. I have treated many cases and in presence of prominent physicians in different cities. Up to the present time, I have never failed in passing a No. 11 French electrode into the bladder, and with very few exceptions at the first treatment. I have had a few cases where it required several treatments before the sound passed in the bladder. During these treatments the patient felt better and was able to attend to his regular business without discomfort. The strength of current that I use is from five to eight milliamperes. The treatments varied in length from three to fifteen minutes. All these cases had been diagnosticated and treated before by other methods, which had failed.

There are two reasons why Newman's method is not more generally used. First, physicians who have never had any experience in treating stricture, have supposed that all that was necessary was to purchase a battery and the necessary sounds, and the electricity would do the rest; which can be compared with a man not having had proper experience, purchasing a fine outfit of surgical instruments and expecting them to do the work, without any experience or brains behind them. It requires, as you well know, the most delicate manipulation in treating stricture, and the surgeon cannot be too careful, nor too gentle. I consider that there is no surgical operation where so much care and good judgment is required as in treating these cases.

The second reason for failure is:

Physicians who are really good genito-urinary specialists, and thoroughly understand the anatomy of the parts and the manipulation of sounds as practised formerly, use by habit the knife or forcible dilatation. Having become used to that form of treatment, it is very hard for them to adopt the gentle pressure necessary in electrolysis for stricture. All the pressure required is to hold the electrode against the stricture, the current does the rest. The temptation of a good surgeon to pass sounds after having passed the electrode to dilate as much as possible, is the cause of his failure; that together with the force used. These two causes, I consider, have kept back electrolysis as a cure for stricture, when it should have the front rank in all cases.

All known plans for stricture, until Dr. Newman's method was discovered, have been very unsatisfactory. I know that all surgeons agree with me in this statement. This being the case, why not carefully follow out Newman's method as laid down by him, and give it a good, thorough trial? By so doing you will cure your patients and earn their everlasting gratitude.

H. E. WAITE, M. D.

IN answer to your favor of February 21, I beg to state that I am very sorry that I cannot comply with your wishes. Since three days, I am sick with an attack of laryngitis and bronchitis, which seems to be epidemic here, and which will make it impossible for me to prepare the desired statements until the required date. I regret this so much more because I have operated on a stricture with electrolysis only a week ago. The affection was of late origin, the first symptoms and preceding gonorrhœa being observed only six to eight months ago. But my experiences with Prof. Newman's method of treating urethral strictures (they are confined to urethral affections only), induce me to recommend the same as a valuable addition to the different operations for this so troublesome affection. No anæsthetics are needed, and every physician who has the needed practice and experience in urethral surgery can perform it. The treatment deprives the patient only for a short time, twenty-four to forty-eight hours, of following his occupation, and the result is uniformly good and *lasting*.

DR. HENRY KOCH.

THE tabulation of cases of stricture of the male urethra treated by electrolysis was long since abandoned by me, as my results have been so uniformly constant and good, that I have not felt the need of this kind of evidence. Going over my records and picking out these cases would necessitate a great amount of labor. Therefore I will carefully estimate the number as 240, these in a general surgical practice, without a single complication that might not follow the most gentle handling of the urethra. I prefer this method as being less painful, and procuring greater permanency of result, than either of the other methods.

J. W. GLASS, M. D.

UTICA, N. Y.

Dr. W. C. Wile, Danbury, Conn., writes February 28, 1893, that he has treated twenty cases of urethral stricture successfully by electrolysis.

Dr. Arthur S. Wolff, State Quarantine Officer, Brownsville, Texas, writes:—"February 3, 1893, About the number of urethal strictures treated by electrolysis, I find from my record forty-seven cases, of which twenty-nine were cured, nine improved, but discontinued treatment, six did not return after second visit, three failed. I have no time to give any further particulars. Electrolysis for stricture of the urethra twenty-five years ago was a terra incognita, but has risen up to be a flourishing colony, the ground of which has been surveyed and cultivated with success, by numerous emigrants from the general medical world, who applied themselves to the investigation of the therapeutical value of electrolysis in strictures. Many pernicious prejudices have been removed, errors corrected and bitter controversies settled. Darkness has given way to light.

There are now in America, England, France, Germany and all over the world, laborers in the field. I need not give the names of the men, even if I knew. Ask them if they do not meet daily with some painful proof that the influence they had hoped to exercise upon their professional colleagues, by the valuable sug-

gestions and record of cases successfully treated by electrolysis, is not far behind their most moderate expectation. And whyis it so? I am afraid it is found in the deficiency of the bulk of the profession, in the practical knowledge of its application, and appreciation of the therapeutical value of electrolysis.

Certainly there are not a few who have by degrees supplied their deficiencies, but they have succeeded by a tedious process, through years of attentive inquiry and experience, or possessing more than the average natural qualifications for the task, of which last Robert Newman is a fair specimen.

Among the many branches of medical science, which of late has undergone the most important improvements, stricture of the urethra by electrolysis has assumed a most prominent position.

We find in the stricture of uretha one of the most arduous, and in my humble opinion the most difficult, branches of surgery. I deem it superfluous to dwell on the reason which renders it so. Let me rather turn my eyes to the consoling fact that the use of electrolysis in stricture has come to the front."

WHILE my experience with electrolysis in the treatment of urethral stricture is too infantile to warrant statistics, yet, thus far, my results do warrant me in saying, "so far, so good."

W. E. DERRY, M.D.

DOVER, N. J.

The Medical Digest.

THE THERAPEUTIC MERIT OF COMBINED REMEDIES.

IN nearly every case where quinia is indicated, it can be advantageously combined with antikamnia, which thus becomes a valuable adjunct to quinia. Quinia, for example, is a most decided febrifuge, and its action is usually promptly reliable; but when combined with this member of the aromatic series, its action is markedly increased. Some individuals, however, cannot take any of the coal-tar derivatives; consequently the use of antikamnia will be inhibited in such cases; on the other hand, some patients cannot take quinine.

An important benefit to be derived from the addition of antikamnia to quinine is that it removes the sense of fullness of the head, constriction about the forehead and tinnitus aurium—so common when the latter drug is administered alone; the disturbing action of quinia on the auditory nerve is suspended to a great extent, and the usual quinine deafness is absent. The combination of these agents in tablet form is a happy one.

The combination of antikamnia with quinia is valuable in the racking headache, with high fever, attendant upon malarial disorders. It is likewise valuable in cases of periodical attacks of headache of non-defined origin; of the so-called "bilious attacks;" of dengue; in neuralgia of the trigemini; in that of "ovarian catarrh;" and, in short, in nearly every case where quinine would ordinarily be prescribed.

Binz claims specific antiseptic powers for quinia; other writers are in accord with him on this point, and report good results from large doses in septicæmia, pyæmia, puerperal fever, and erysipelas. It is a germ destroyer of the bacilli of influenza (la grippe). A full dose of quinine and antikamnia will promptly relieve many cases of this disease. In the gastric catarrh of drunkards, this combination is valuable. Quinia is a poison to the minute organism—sarcina; and antikamnia exerts a soothing, quieting effect on the nerve filaments. A full dose of antikamnia and quinia will often arrest a commencing pneumonia or pleuritis. This combination is also useful in the typho-malarial fever of the South—particularly for the hyperpyrexia—both quinia and antikamnia, as previously said, being decided fever reducers.

The germicide power of quinia is the explanation of its success in the treatment of malarial disturbances. Thus it is also a prophylatcic against the various manifestations of malarial poison, and as such it can be relied on. The cause of malaria as a disease consists of pigmented bodies, which penetrate the interior of the red blood corpuscles—pigmented bodies of various shapes and flagellate organisms—both having amœboid movements—the filaments being in active vibration.

In meningeal troubles, attended by marked acceleration of the heart due to

the rise in the fever temperature, full doses of quinine and antikamnia at intervals of, say, about four hours, will be productive of good. In measles, large doses of the combination at night—say ten grains of each for adults (doses for children in proportion), will relieve the distress of the catarrhal pneumonia, and modify, in great degree, the amount of the exudative products. The periodical neuroses which may be either regular or irregular in their manifestations, but which are dependent on the malarial germ for their origin, are all controllable by the combination of quinine and antikamnia. Examples of such neuroses are asthma, laryngismus stridulus, summer catarrh, etc. Indeed, for the hemicrania and neuralgias of malarial origin, the combination of quinine and antikamnia, just alluded to, may be declared *a specific.*

The dose of quinine may be made smaller than usual when administered with antikamnia. Thus, one or two tablets of two and a half grains each of quinine and antikamnia will prove sufficient for great utility in puerperal mania, in the headaches of advanced age, accompanied with vertigo and despondency.

This combination is capable, by the combined influence of each drug on the nervous system and blood, of restraining all the processes which develop heat, organic changes, and muscular motion; therefore, it is "the one thing needful" in the treatment of the hyperpyrexia of malarial fevers. In the vast majority of cases, when necessary to administer quinine, if antikamnia be added to the prescription, the results will be surprising.

Formerly, the idea prevailed that in order to render the treatment of periodical fevers efficient, the gastro-intestinal tube should be cleaned out by emetics and cathartics. This, however, is a fallacy, as the conditions they are intended to remove depend mainly on the malarial poison, for which the combination of quinine and antikamnia is the specific cure.

In speaking of the treatment of pneumonia by quinine and antikamnia, Prof. Palmer says: "The effects desired, and certainly as a rule produced, are a decided reduction of temperature, a marked diminution in the frequency of the pulse, a decided moisture of the skin or free sweating, a slower and more easy respiration or relief from pain, and the feeling of fullness of the chest, a diminution of the cough and of the tenacious and bloody character of the expectoration; and, in short, not only is there a checking of the fever, but of all evidences—general and local—of the pulmonary engorgement and inflammation."

In Meniere's disease, or "labyrinthine vertigo," this combination has, by persistent use, entirely removed the trouble in many cases. The curative effects of quinine and the coal-tar antipyretics in sunstroke are well known, and have been used recently with great benefit in numerous instances in this country and in India. In hysteria, and even in epilepsy, the combination of quinine and antikamnia is often indicated, and will frequently give the desired results. In whooping cough and hay fever, quinine and antikamnia will prove beneficial.

The tablets of equal parts of quinine and antikamnia spoken of in this article, can be administered by the rectum, with good effect. They should first be dissolved in whiskey, and then water can be added in any quantity needed—always remembering the total quantity of each drug in such enemata—Stephen J. Clark, M. D., in *Va. Med. Monthly.*

THE EDISON CURRENT FOR CAUTERY PURPOSES.—In the *New York Medical Journal* for February 4th, Dr. Edward J. Bermingham, Surgeon to the New York Throat and Nose Infirmary, describes a very ingenious apparatus which he has devised for controlling the Edison current so that it can be used direct for galvano-cautery operations. The apparatus consists of a *rheostat*, made of coils of iron wire and a handle. The peculiarity of the handle consists of its having solid conductors, and the circuit is therefore always closed. It is under the control of the operator's thumb at all times during the operation, and the current can be cut off from, or allowed to pass to, the knife instantaneously and without producing an arc. The apparatus is simple and inexpensive, and, from the detailed description given, any electrician can construct it. Dr. Bermingham has been using it for two years and a half for all his cautery operations.

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HYPODERMATIC MEDICATION IN SYPHILIS.*

By L. WOLFF, M. D.

[Clinical Professor of Medicine, Woman's Medical College of Pennsylvania, Physician to the German Hospital of Philadelphia; Demonstrator of Chemistry, Jefferson Medical College etc.]

AMONGST the therapeutic methods which are largely employed on the continent of Europe, but have found very few adherents in this country is, no doubt, the hypodermatic treatment of syphilis. Although proposed and practiced in the early part of 1860, it was some time before it was extensively employed, even abroad. This was, no doubt, largely due to the fact that it was little understood, that, from temerity, the doses employed were by far too small, and results, therefore, not brilliant, as well as from fear of the formation of abscesses and the necessary amount of pain accompanying such medication. The pain accompanying it is to-day still an argument against its employment that is not to be overcome. If we, however, consider that in the principal medical centres of continental Europe little or almost no mercury is given internally any more, even the pain accompanying and following the injections must be outweighed by the results. While the first experiments on hypodermatic medication in syphilis were made with solutions of corrosive sublimate, the insoluble mercurials were soon substituted by Scarenzio and others. Therefore, we may divide the mercurials into those preparations which are soluble and those which are insoluble mercurials. It was found that if insoluble mercurials were introduced beneath the skin they were rapidly absorbed, that they were soon found in the urine, and, also, often produced the untoward effects of mercury, besides their characteristic inhibiting and curative influence over the lesions of syphilis.

In a former paper on this subject (*Therapeutic Gazette*, November 15, 1889), I dwelt on the history of this method of medication and gave, also, a synopsis of the literature on the subject. I shall, therefore, in this paper, consider principally my experience with this treatment and with the various agents so employed. During my student days I had the opportunity of watching and practicing this method, and I have continued to employ it to this day in a large and varied practice which has brought, perhaps, to me an unusual number of cases of early and secondary syphilis. Though I have again and again abandoned it, owing to the pain it occasioned, I have always had to revert to it in order to satisfy my patients, who, if they had been treated hypodermatically once, and were then treated with mercurials taken by the mouth, would gladly stand the pain of the injections rather

*Read before the Philadelphia County Medical Society, March 8, 1893.

than the slow results and the digestive derangement caused by the older methods of medication.

I usually begin the injections of corrosive sublimate in the intrascapular region on one slde and about two inches from the posterior vertebral processes, and continue down the back in the costal interspaces—the injections being about one or one and a half inches apart. The effect of the injections on still open primary sores, on indurated glands, on macular syphilides, and on pharyngeal ulcerations may be said to be almost magical. It is noticeable that within a few days, and usually within one week or ten days, all these signs have disappeared. The same beneficent results may, also, be said to take place in specific iritis and choroiditis, and it is especially in these two affections that I consider the hypodermatic administration of corrosive sublimate, in the doses and manner mentioned, of the greatest value. Papular eruptions do not show the same tendency to disappear rapidly under the hypodermatic treatment, but have usually faded within a few weeks. The effect on luetic fever and nocturnal pains is so marked that with the first or second injection the patient notices a marked improvement. I never use less than a one-fourth grain injection at one time and generally employ a one per cent. solution in distilled water, filling a syringe of twenty-five minims capacity. These injections are continued daily, and during the first week or two patients stand the treatment fairly well. There is rarely, during this period, any evidence of soreness of the mouth or gums, nor is there any intestinal trouble noticeable. After the entire back, on both sides, had been gone over with injections, many of which have left quite sensitive indurations, their repetition in or near the old places proves quite painful, and it is only then that real complaints from patients are heard. Usually after eighteen or twenty injections tumefaction of the gums becomes marked, and gingivitis is often noticed. The daily injections are then intermitted, and are made at intervals of two, three, or four days, the untoward symptoms rapidly disappearing during such intervals. The total number of injections usually made in any one treatment is about twenty-five, but I have continued them to the number of thirty or thirty-five, when marked pigmentation of the local lesions supervened. A good rule may be to carry on hyper-medication for about two weeks after the total disappearance of all symptoms. It is, of course, understood that during this time the patient is to be supported by a liberal diet, by milk punches, and, when the digestion is impaired, by tonics and quinine. The mouth should be kept scrupulously clean, the teeth being cleansed after each meal and at bedtime with a soft brush dipped in a solution of one drachm of potassium chlorate to six ounces of water, and containing, also, a drop of carbolic acid to each fluid ounce. While warm full baths or steam and hot-air baths are adjuvants to the treatment, the cold bath should be interdicted, as well as exposure to cold and deprivations. I may safely say that I have made thousands of these injections, and have yet to record a case where they have been followed by abscess or sloughing. All of my cases so treated were ambulant, and I do not remember that any of them have lost a day from their usual vocations.

The immediate effects of the injections of corrosive sublimate have been so uniformly good that I need to consider now only the remote effects on the progress of the disease and its liability to relapses. The permanency of a remedy in syphilis is one of the features of the greatest importance, and here I must say that as rapid as is the beneficial effect of this method of medication, there is a corresponding large number of relapses. Of the cases that I have so treated, and of which I have been able to keep a record, I can safely state that in about sixty per cent. no further symptoms developed. I have notes on a number of cases so treated who subsequently married and raised apparently healthy offspring. Of the remaining forty per cent., however, I cannot say that they have done so well, and many of them after receiving two, three, and even four courses of treatment by injections had to submit to treatment by systematic inunction before the tendency to relapse has been overcome.

It is this tendency to relapses which has caused me to abandon hypodermatic

injections after a second failure as to permanency of cure. It made me investigate the many other mercurials suitable for hypodermatic medication. It has been experimentally proven by Vajda, of Vienna ("Ueber den Einfluss des Quecksilbers auf den syphilitischen process"), that the iodides inhibited the elimination of mercury by the kidneys, and that the slower the elimination the greater the safety from relapses. For this reason it has been my practice to give five to ten grains of potassium iodide three times daily, after the injection treatment, for months to come; but even this plan has not always prevented frequent relapses. Acting on this indication, and at the suggestion of my friend Dr. Thomas H. Fenton, I have tried injections of iodo-hydrargyrate of potassium, a compound of iodine and mercury, but I have found these injections no less painful, and their permanency has not been greater in my hands than with the corrosive sublimate treatment. In respect to permanency, it is said that the injections of the insoluble mercurials are of greater benefit than the soluble ones. This might be inferred from the fact that their conversion into a soluble compound beneath the skin is a slower process, and while thus a mild continued mercurialization is produced the injections need not be repeated so often. The insoluble mercurials have, however, the disadvantage of not being always aseptic, nor of being readily rendered so. It is true that with the introduction of vaseline oil as a vehicle for their hypodermatic administration they can be rendered both less septic as well as less painful.

At the head of the insoluble preparations so far as efficiency is concerned, calomel must figure. I give below the formula for its use, as well as the formulæ for other of the insoluble mercurials, according to Professor Edward Lang in his "Ordinations Formeln":

℞.—Calomel }
Vaseline oil } . . . . . aa 4.5 grammes
Lanolin . . . . . 4 "

Each c.cm. contains 0.371 grammes of mercury, 0.1 c.m. to be injected not oftener than two or three times the first week.

The precipitated mercuric oxide (hydrarg. oxid. flav.) comes next.

℞.—Yellow oxide of mercury . . 4 grammes
Vaseline oil . . . . . 4.5 "
Lanolin . . . . . 3.5 "

Each c.cm. contains 0.391 grammes of mercury. To be used as the calomel injection.

The salicylate of mercury is lauded very highly, and is prepared for the injection as follows:

℞.—Salicylate of mercury . . . 7 grammes
Vaseline oil . . . . . 4 "
Lanolin . . . . . 2 "

Each c.cm. contains 0.391 grammes of mercury.

The latest preparation, and, at the present time, the one generally employed in the hospitals of Paris, even by the veteran Fournier, is the mercurous oxide, which is really a mercurous-mercuric oxide, but better known as the black oxide of mercury. It is used as per following formula:

℞.—Black oxide of mercury . . 4.7 grammes
Vaseline oil . . . . . 6.2 "
Lanolin . . . . . 3.1 "

Each c.cm. containing 0.39 grammes of mercury, and to be used as the other preparations.

I might go on and quote in the same manner the thymol-acetate, the diphenylate, and the sozoiodolate of mercury and other forms of the drug, but, as those named are the preparations generally used, I will omit the others.

It will appear from the above that, after all, the virtues of the preparations quoted consist in the amount of mercury they contain and in the slowness of its conversion beneath the skin. The more rapidly converted the sooner the lesions disappear, the more mercury introduced with safety to the general health the greater the curative effect on syphilis; but the slower and more persistent the conversion, the greater the permanency of the treatment and the likelihood of a total extinction of the syphilitic poison. It may be said against these insoluble mercurials, and with some force, that their advantage over the soluble preparations is only by their slower action, while the marked local reaction which they produce is quite as much as with the soluble mercurials. Such is really the case, and the desideratum, therefore, seems to employ a preparation that will produce the least reaction and that will be slowly converted, while least in its probability to produce untoward effects. Professor Edward Lang, of Vienna, some years ago experimented on the direct introduction of metallic mercury in minute subdivision as being nearest to the ideal method of inunctions, which yet holds the highest place in perma-

nency in the treatment of syphilis. He found that they were readily borne, that they produced little or no local reaction, and, on account of the slow conversion of the mercury, needed repetition only at long intervals. He claimed that the introduction of the metallic mercury hypodermatically exercised an influence over the syphilitic process which was in direct proportion to it conversion, which could be studied by its excretion through the kidneys. This appealed to me as one of the methods most likely to prove more permanent than any of the others, and I introduced it in my private practice as well as in the wards of the German Hospital under my control.

To fully describe this method I must mention the manner of its preparation for hyperdomatic use, as given by Professor Lang in his "Ordinations Formeln." This consists in first making an ointment of mercury with lanolin, as follows:

Anhydric lanolin, 15 grammes; dissolve in q. s. chloroform, 50 grammes, and evaporate the chloroform by continued stirring until the weight is 30 grammes, then add pure metallic mercury, 30 grammes, and continue stirring until all the chloroform is evaporated and the mercury is perfectly extinguished. (This can be recognized, if, by spreading with a spatula on paper, no mercury globules are visible by means of a magnifying glass.)

This is his strong lanolin mercurial ointment, and it forms the basis for his oleum cinereum or gray oil. Of the latter he has two preparations, according to the dilutions, the fifty per cent. and the thirty per cent. oil. The formula for the former is as follows:

℞.—Strong lanolin mercurial ointment . . . . . 9 grammes
Olive, almond, or vaseline oil . . . . . 3 grammes
Mix well.

This contains in each 0.05 c.cm. to 0.04 c.cm. of mercury. 0.05 c.cm. is the average dose for injections, but if it is desirable to inject double the quantity it is best done in two different places. To produce a very active effect it is advisable to inject twice a week 0.05 c.cm. of this strong oil until all symptoms have disappeared. After that, and to prevent relapses, 0 05 c.cm. should be injected about once a week or once in two weeks for some time afterward. All injections should be made, beneath the skin, in the back, about one inch from the median line, the semi-solid mixture being previously warmed by immersion in hot water until it becomes fluid. Lang also makes use of injections of 0.05 c cm., two to four times during the first week, and subsequently every week, and later every two weeks, the same amount. He also recommends a milder gray oil, made as follows from the strong lanolin mercurial ointment:

℞.—Strong lanolin mercurial ointment . . . 4.5 grammes
Oil of sweet almonds (or olive or vaseline oil), 5 5 grammes
M.

Each c.cm. of this contains 0.336 grammes of mercury. This is termed the thirty per cent. gray oil. Of this oil one-tenth c cm. is the average injection made in two places of the back.

These formulæ, complicated as they may seem, can be easily worked out, and when once the lanolin mercurial ointment is made the dilution requires very little time, as but small quantities are required; a half ounce will last for weeks and, if necessary, should be made fresh every month or two, although these oils really keep a much longer period.

The syringe for injections should be accurately gauged and sub-divided into 0.1 c.cm. and tenth parts thereof. The syringes, as made by Reiner, also Leiter, of Vienna, are used for that purpose, the total capacity of each being a half of a cubic centimetre. They have been accurately gauged, and a certificate of accuracy accompanies each. While it might be well to disinfect the needles and syringe before using, by syringing them with a four per cent. carbolic water, I have found that there is but little danger in private practice even if this precaution is not observed. The gluteal regions are said not to be very suitable for these injections.

In the use of the gray oil it has been my practice to inject 0.1 c.cm. every week for the first four to six weeks. Usually macular eruptions fade after the second or third injection, papular ones after the fourth or fifth. Examination of the urine showed the presence of mercury within

the first week, and its presence was noted for a month and more after all injections had been stopped. The injections of smaller quantities (0.1 c.cm. of the 30 per cent. oil) in different parts of the back are of greater advantage than the injection of double the amount in one place, the urine showing the mercury sooner in the first case than in the second. The only precaution to be observed in the employment of the gray oil is not to use too much. It is a frequent temptation when the curative process is slow to increase the amount injected or to repeat it oftener. This is to be avoided, as the mercury is only slowly converted and accumulates to the point when it manifests its potency over the syphilitic process. Another precaution to be observed is to pay careful attention to the teeth and mouth. As the development of absorbable mercurial compounds is progressive the injections should be discontinued or made less, even upon the slightest effect noticed on the gums. This medication is a most effective and potent one, and I can readily see how, by a lack of precaution, severe salivation might ensue. Let no one suppose that, as there is little reaction immediately upon the injection, it might be pushed without hesitation. The literature has several cases where an uncalled-for free use of this remedy has caused not only bad but also fatal results. In my experience such has not been the case, although I have employed it with uniformly happy results in a large number of cases.

To sum up the indications for the hypodermatic medication of syphilis, I should say that in cases where the symptoms require urgency of treatment I would employ the injection of a one-fourth grain of corrosive sublimate, at first daily and subsequently every other day until about twenty five injections had been given. If, after this, all the symptoms have not entirely subsided (entire absence of all pigmentation) I should resort to injections of the 30 per cent. gray oil, 0.1 c.cm. in one or two places in the back once a week until six to eight injections have been made. If, after a shorter or longer period without medication, further manifestations of syphilis should appear, the same series of injections with gray oil should be made and thus continued until, after long lapses between treatment, no further return of the lesions appears. The injections of corrosive sublimate, as described, have the advantage of more rapid action, and will often suffice. I should always recommend their use at first as preferable to others, but when relapses occur the injections of gray oil are both less painful and promise greater immunity from subsequent relapses.

DISCUSSION.

Dr. J. William White: There are some points in the paper, which attracted my attention, although I make mention of them chiefly to disagree. The reader stated in one of the opening paragraphs of his paper that in the principal medical centres of Europe little or no mercury was given by the mouth, the inference being that in this respect we are behind the times. As a matter of fact, if we look over the present treatment of syphilis in the hands of the most distinguished men of the profession who have made syphilis a specialty, we shall see that the reverse of this statement is true, and that comparatively little mercury is given hypodermatically. In Germany some of the best men have pronounced against it as the method of choice, although there it prevailed to a great extent. In France, even the veteran, Fournier, has pronounced against the routine use of the hypodermatic method. In Great Britain, Jonathan Hutchinson finds no reason in his experience for the use of this method. In this country, Taylor and Keyes, of New York; Bryson, of St. Louis, and specialists in all parts of the country are reserving the employment of this method for rare cases. I would, therefore, take issue with the statement that in the principal medical centres of Europe this is the method of choice.

Another point which attracted my attention was the extraordinary quality that his patients seem to possess of preferring this method of treatment. This is absolutely the reverse of the experience of everybody else who has put himself on record. Fournier has called attention to the fact that while you may cause a rapid disappearance of the disease, you also cause a rapid disappearance of the

patient. Every French syphilographer who has recently written has emphasized this point, with the exception of two or three enthusiasts, who are still carrying on experiments in this direction.

The remarks in regard to the effect of the treatment on open sores, would seem to indicate that Dr. Wolff began the treatment very early. If the rule, not to begin treatment until constitutional symptoms are manifested, were adopted, it might change his percentages. Her statistics are open to the imputation that the cases were not all cases of syphilis on account of the fact that there is a considerable proportion of "sores" which it is impossible to diagnose, unless constitutional symptoms are waited for.

Dr. Wolff gives twenty-five to thirty injections, and then stops the treatment. That seems the most defective feature in the method It has been claimed that the disease is cured by thirty-five injections, each of a quarter of a grain of corrosive sublimate, the treatment lasting a little over a month, a little less than nine grains of mercury being given. If this is true, we have to suppose that there is some virtue about mercury given in this way which it does not possess when administered in other ways. The evidence is steadily accumulating that it does not produce permanent cures and that it is attended by a larger number of relapses than other methods, and the claim that thirty or forty injections of a soluble preparation of mercury or five or six of an insoluble preparation will produce a cure of syphilis, is without foundation. Dr. Wolff spoke of the liability to relapse, and I can readily understand this if he stops at the end of thirty-five injections. If he had only forty per cent. of relapses, he was fortunate.

As to the insoluble preparations, calomel, which Dr. Wolff places first, is first in order of time, as it was introduced in 1864, and revived seven to ten years ago by Smirnoff, a Russian physician, and has, until a few years ago, kept its place. It has, however, been supplanted by the yellow oxide, which is now used more than any other insoluble preparation. The objection to this plan is that it is only another way of giving a soluble salt. The insoluble salt is slowly converted into a soluble form, and, so far as I understand the matter, this becomes one of the most inaccurate methods of giving mercury. One of the claims put forward for this method is that it insures scientific accuracy. Anything more unscientific, as regards precision of dose, than to throw under the skin an emulsion of metallic mercury in lanolin or a quantity of calomel or yellow oxide, and allow it to remain there, subject to the vicissitudes of different degrees of inflammatory action attended with different degrees of absorption, would be hard to imagine.

As to the freedom from harmful consequences, as a matter of fact you have in some patients, as a direct result of this treatment, a violent stomatitis, dangerous salivation, entero-colitis with bloody stools, and where vaseline or fatty preparations are used, pulmonary embolism. There are on record fatal cases from these sources. Occasionally the metallic mercury remains under the skin inert for a time, and then suddenly becomes absorbed in large quantities, with the development of violent symptoms.

These objections are founded upon the observations of men who were advocates of the method, and who have had the frankness to record their unfavorable cases, and cannot be disputed. Autopsies in cases where the insoluble salts have been administered experimentally in other diseases, show that there is great variability in the rapidity of absorption.

The pain is severe and belongs to every mercurial salt administered in this way. Lang's statement in regard to the absence of pain and other symptoms after the administration of the gray oil, is contradicted by other observers. In the best hands there has been a certain percentage of abscesses, and although the introduction of antiseptic methods has reduced their number, they are occasionally inevitable. Far more frequent are the painful nodosities about the seat of the injection.

The conditions under which the method should be employed are extremely limited. I believe that it should be held in reserve for cases where other methods have failed. Given a patient whose gastro-intestinal tract reacts to mercury in such a way that the various preparations become irritants, and in whom the use of inunctions produces a violent dermatitis

or mercurial erythema, and such a case would suggest a trial of the hypodermatic method. In grave emergencies, such as the serious eye-troubles of the secondary stage, it might even be regarded upon an equal basis with inunctions. There is no evidence to show that it is of greater value. If you want to produce rapid mercurialization, the administration of small doses of the protiodide, calomel or mercury and chalk, supplemented by the simultaneous inunction of mercurial ointment, will almost equal in rapidity the use of the soluble salts of mercury. I think that everyone will admit that in the presence of threatened grave complications, the hypodermatic method might be suggested. In old syphilis, mercury does not take the place of iodide of potassium. If you have a gummatous meningitis, or an infiltrating gumma of the brain, or a periostitis in the late stages of syphilis, or if you have any of the tertiary phenomena, while mercury hypodermatically might be useful it should be regarded only as a valuable adjuvant, but secondary to the use of the iodide of potassium.

I think that this subject is well worth discussing, and I am extremely glad that Dr. Wolff has read this paper. I came to hear it, and to put myself on record in relation to the whole question. I think that in what I have said I have spoken the views of the majority of syphilographers.

Dr. Richard A. Cleeman: I have used the hypodermatic method, and I think that Dr. White is a little severe. I have had several patients who preferred it very much to mercury by the mouth. I have used more than thirty-five consecutive injections, and have given as much as one-third of a grain at a time, giving two injections of one-sixth of a grain each. I have never had abscess, but I have seen the painful nodosities, and once I had to stop because the parts were so painful that the patient was not willing to continue the treatment. After the nodosities disappeared, he came back and the treatment was resumed.

I have found, contrary to what has been said in the books, that a small quantity of corrosive sublimate will not remove the symptoms, particularly in cases of tuberculous skin disease in the form complicated with ulceration. You have to use many injections before any effect on the ulceration is produced. Finally, the ulcerations disappear as a rule. The great advantage of the use of injections is that you overcome the great tediousness of the ordinary treatment and the liability of the production of digestive disturbances. In a case I have in mind the man was in splendid general health while the hypodermatic method was used, but when mercury was used by the mouth he suffered from diarrhœa and troubles with the stomach.

I have not used injections in the primary stage of syphilis, but in one case I have used them immediately on the appearance of the secondary symptoms. After the use of twelve injections the symptoms disappeared, but they reappeared in the course of a month in a rather unusual form—that of thickening of the nails. I am now using injections in this case. The general health is excellent, although he was much run down before; he is much pleased with the method. The pain, while it is sometimes severe, is not unbearable.

Dr. J. A. Cantrell: Contrary to the experience of Dr. White, I must say that the hypodermatic treatment of syphilis will cure in most of the cases. I have seen forty or fifty cases where the treatment has been continued up to thirty or thirty-five injections, and where the patients have not come back for the treatment of the disease. I have seen one of these cases seven years after the treatment, and there had been no return of the disease. I have, however, seen cases where the injections, have been continued until as many as sixty or even one hundred and twenty had been given without benefit. Fournier has, I believe, within a month injected for macular syphiloderm. Sometimes the injections are not absorbed for a week or ten days, and often leave decided ulceration. In the cases in which I have seen the method employed, I think that it would have been better to have used internal treatment, and if the cases did not do well the hypodermatic method might have been tried.

Dr. Edwin Rosenthal: I have used the hypodermatic injections of corrosive sublimate quite a number of times. I

think that Dr. White is too severe in his denunciation of treating syphilis. Practical experience has demonstrated its utility and the many advantages it has over other methods. The inunction method, for instance, is the dirtiest that can be employed, and will drive away more patients than the hypodermatic method will. One of the points in favor of the latter method is that the patient has nothing to do with the treatment, but eat and drink whilst undergoing a cure. The injections are cleanly, devoid of all risk when judiciously made; at first they are made daily, and afterward every second or third day.

I have given the injections in the primary disease, in a case of chancre of the tongue, in which the lymphatic glands in the cervical region were very much enlarged, and where the internal administration of remedies could not be borne by the patient, and prompt treatment was indicated, with very good results. This patient is still under treatment, but there has been no appearance of an eruption.

Speaking of the large dosage given at a single injection and its good results, I wish to record another point, and that is: In infantile syphilis the dose of $\frac{1}{200}$ or $\frac{1}{100}$ grain of corrosive sublimate, as recommended by Dr. Jacobi (*Journal of Pædiatrics*), is too small. I have seen a vast number of cases of infantile syphilis, and have lost quite a number, until I increased my dosage; and I never begin with less than $\frac{1}{90}$ grain of corrosive sublimate, and gradually increase the dose.

Dr. Charles Wirgman: A point to be borne in mind, both in private and hospital practice, is that as soon as the lesions disappear the patient ceases to return for treatment. No matter how eloquent you may be in regard to the necessity of continuing treatment, they disappear. If it could be demonstrated by a more extensive use of this method that 35,75, or even 175 injections will take the place of two or three years' treatment, that would be a great boon to humanity, and the question is worthy of serious consideration and further trial.

Dr. S. Solis-Cohen: The discussion points to the fact that it would be well to elicit further testimony as to the time when a syphilitic patient can be considered "cured." My own experience has been so largely with late lesions, occurring in cases that have been treated by many different methods, and in which quite a number of years has elapsed since the primary infection, that I am compelled to consider it at least premature, because symptoms may have disappeared for a time, to say that the treatment has cured the disease. The patient must, it seems to me, be kept under observation for a prolonged period, before we can record even a probable cure or recovery; and this is the fatal defect of all methods which limit themselves to a comparatively brief period during the time of early symptoms. My personal use of hypodermatic injections of mercury in syphilis has been limited to the employment of corrosive sublimate for rapid effect in early or late cases, so that I am unable to discuss the other methods, except from a theoretical standpoint; and therein I am entirely in accord with Dr. White. In the extreme cases of late lesions I sometimes meet, I resort preferably to inunction, associated with or followed quickly by internal use of potassium iodide in ascending doses; and acting upon a suggestion of Bartholow's, I sometimes conjoin with this the steam bath and the hypodermatic use of pilocarpine to hasten elimination. It is dangerous to push the action of tissue-destructives unless we provide for rapid elimination. Hence the advantage, too, of giving large draughts of water or milk with potassium iodide.

Dr. Joseph Hearn: I have used the hypodermatic method in only one case where the stomach was irritable. Under treatment of one-eighth of a grain doses the patient improved. I think that it is a method which should be held in reserve. There are cases which cannot bear the iodides. I have been taught that the iodides do not cure syphilis, but rather its consequences. Only mercury cures syphilis. If I am in a hurry, I use inunctions, but if there is no urgency I use internal treatment. I cannot say how many of my cases are cured. I believe that the disease can be put in abeyance so that the patient will live any length of time.

I would like to ask if the administration of mercury during the primary stage

will mask the secondary symptoms so that you cannot recognize them.

Dr. James Mitchell: We have patients with syphilis where the disease appears to have taken a mild form. I have used all forms of treatment with the exception of the hypodermatic. My experience of late years has been principally with the secondary and tertiary affections, particularly of the eye. I find that sometimes the patients deny anything like infection. I think that when we come to a study of the treatment of any disease, we must take into consideration the fact that all diseases vary in their intensity in different individuals. And I think that this is the reason that we have different results with the same treatment, and why one method of treatment will fail while another will effect a cure.

Dr. John B. Deaver: My experience with the hypodermatic administration of mercury is comparatively limited. I have not used it sufficiently to say much in its favor. Of course, one of the objections is the decided pain which it causes. Painful indurations have been marked in some cases and have been some time in disappearing. I have, however, seen most excellent results obtained in ulcerative conditions of the pharynx and soft palate, where the internal administration of mercury did not suffice, largely, perhaps, because it excited irritation of the digestive tract, and where inunction had also failed.

One of the weakest arguments against the use of injections is that a cure is produced in so short a time. I believe that many of the cases of early relapse are due to the fact that the physician has been led to believe that he has cured the case. From my observation, I think that treatment should be prolonged for four years, or, at least, three years. I have had sufficient satisfaction with the ordinary treatment not to resort to the hypodermatic method, except in special cases.

Dr. White: In reply to the question of Dr. Hearn, I would say that I believe that the prompt administration of mercury in primary syphilis will prevent the appearance of the secondary symptoms. I used to think to the contrary, but observation, experience, and reading have led me to change my views.

I know of no test which can be applied to the individual which will demonstrate the presence or absence of active syphilis. I believe that ninety to ninety-five per cent. of the cases can be cured, but it is impossible to say at the beginning which of the cases will not be cured. As a matter of fact, syphilis is inclined to be a self-limited disease. Nothing but the experience of years will demonstrate the possible cure. The point has already been made in regard to relapses, and I think that figures are accumulating that are distinctly against the method, and will show that the proportion of relapses with the hypodermatic method is greater than under the classical methods which we have been using.

Dr. Drake: I have recently returned from Europe. For six months I was Kaposi's assistant. In most of his cases he uses the hypodermatic method, the injection being made in the gluteal region once a week. Neuman, of Vienna, uses the salicylate of mercury hypodermatically. He also uses internal treatment in some cases. Lang, of Vienna, is at the present time experimenting with the gray oil. Lukasiewicz also uses injections of a five per cent. corrosive sublimate solution, a gramme every week.

In Berlin, the dermatologists and syphilographers, Joseph and Lassar, use hypodermatic injections in most of their cases. In some they use inunction.

In Paris, Fournier was using hypodermatic injections at the time that I left. In some cases there, after the first injection the eruption entirely disappeared. Of course, it was a little painful, but it did not occasion the patients much trouble, and they gladly submitted to the treatment, and preferred the hypodermatic injections.

Dr. Wolff: As stated in my paper, I have made thousands of injections, and the patients whom I have taken off the hypodermatic method and given protiodide by the mouth, have asked to have the former method resumed. They did not seem to mind the pain very much.

In regard to the administration of the remedy before the diagnosis was established, I would state that the injections were not made until the macular eruptions and other characteristic symptoms had manifested themselves. I never treat constitutionally for the primary sore alone.

As to the results, I have stated that I have found no return of the symptoms in

sixty per cent. of the cases. I do not know whether or not these gentlemen can tell syphilis when there are no symptoms. Syphilis is only present, in my opinion, when there are symptoms. The duration of the treatmeut has been, on an average, twenty-five injections, and I am not the only one who makes that statement. Many thousands of cases have been treated at the Charité in Berlin.

Kaposi led the discussion on the therapeutics for syphilis, at the Congress für innere Medizin in Wiesbaden, 1887, and it was generally accepted for the principal pal methods of treatment and the relative permanency of their results, as follows: the inunction method, most permanent; the calomel injection treatment next, and the hypodermatic injection of corrosive sublimate, as third. It was stated elsewhere that the permanent results of the first were seventy-five per cent.; the second, seventy per cent.; the latter, sixty-five per cent. My results have not been so good, although I injected larger doses and for a longer time.

In regard to the time of cure. This may be said to be obtained when there is no return of symptoms. There is no such thing as saying that syphilis will be extinct after two or after four years. I have seen it return after twenty years, in spite of treatment. There is only extinction when there is no return of symptoms. To limit it to any one time is almost out of the question, because the time of cure for syphilis cannot be predicted.

I have given my paper as the result of personal experience. If mistakes have been made, they have been the result of misinterpretation and lack of a sufficient number of cases, rather than a want of truthful statement.

NON-MEDICINAL METHOD OF TREATING CHRONIC CONSTIPATION.*

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AMONG minor ailments probably none are more annoying to the physician, or disheartening to the patient, than chronic constipation. Ordinarily one after another a series of drugs will be prescribed, each affording in a measure a relief for a time, then becoming powerless until finally the patient becomes disgusted with doctors and resorts to the injection (Hall treatment), or still worse, the various patent nostrums which are advertised to cure this annoying condition. There is another method independent of medicine, which, I believe, will render permanent benefit in nearly, if not all cases, either before or after medicine has failed to do the work. This method, while not understood by some, is too frequently overlooked by others who do understand its value, in a measure, in their great hurry to obtain immediate relief. The method referred to embraces several features, some new, while others are more or less familiar to many of you.

Under the title of this paper I will endeavor to bring prominently before you the method which I use in the treatment of this annoying condition. In the beginning, however, I desire to say that I am of the opinion that through medicine we do at times get some happy results, at the same time, I must admit, according to my belief, that the indiscriminate use of medicine causes more cases of constipation than it cures. As I take it, medicine should be the secondary and not the prime factor in the treatment. The essential features in this method of treatment are as follows, in the order of their importance, viz.:

First. Dilatation of the sphincter ani.

Second. Abdominal massage.

Third. Electricity.

These to be applied by the physician; the patient, too, must perform his duties under instructions, which are as follows:

First. Go to stool daily at the same hour.

Second. Correct errors in diet.

Third. Take sufficient out-door exercise.

Fourth. Dress warmly in winter.

Fifth. Take a cold bath every morning, followed by thorough rubbing.

Sixth. Drink a glass of cold or warm water on arising in the morning, or eat fruit at the beginning of the morning meal.

Seventh. When the case demands it, make a change in climate or occupation.

Dilatation of sphincter ani, as I take it,

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is the most *important* factor in the treatment. For several years I have preceded nearly all my operations about the anus and rectum by divulsion of the sphincter in order to prevent after pains from its contractions. Many of these patients were afflicted with constipation previous to the operation, and they not infrequently remark afterward that I have cured them of their constipation as well. After due reasoning, I came to the conclusion that this marked benefit of the constipated condition was a result of dilatation. At this time I determined to try it on some of the old cases of chronic constipation which I had been trying to relieve by other remedies. The results so obtained were so gratifying that two years ago I made a statement, in the Kansas City Academy of Medicine, to the effect that I believed nearly all cases of habitual constipation could be benefited, if not entirely relieved, by thorough dilatation of the sphincter. One year ago, the first of last February, I read a paper before the Jackson County Medical Society, in which I advised this procedure in conjunction with abdominal massage, with the report of several cases thus treated successfully. Some time after I began these experiments, I noticed an article in the *N. Y. Med. Journal*, by Dr. Clement Cleveland, advocating dilatation as a cure for constipation with a report of cases.

A short time after this, Dr. Ferdinand Durand comes out in an article recommending it in the treatment of constipation in children. Dr. Matthews, of Louisville, Ky., in a recent text-book on rectal surgery, recommends it as one of the most valuable factors in the treatment of this condition. With the exception of the articles herein named, I think little has been written on this method of treatment, hence I draw my conclusions that it is a comparatively new procedure. The more I practice this method, the better I am pleased with the results obtained. Of late, however, I have been in the habit of combining with it several other features previously named, in order to build up the general system as well.

The theory of the operation may be partially explained in the study of the action of the external sphincter. If this muscle is destroyed by any operation around the rectum incontinence will certainly follow. This demonstrates beyond doubt that the control of the fæcal mass is vested in this muscle. Its action seems to be twofold; first, that of preventing peristalsis forcing the fæcal contents out before the proper time for defæcation has arrived, and, secondly, to assist in the expulsion of the same in conjunction with the expiratory muscles when normal defæcation does occur. It is obvious then, in long standing cases of constipation, where an action does not occur except at long intervals, a large fæcal mass may collect in the sigmoid, rectum, and not infrequently in the cæcum. This frequently brings about a temporary paralysis of the bowel, and, to a certain extent, a loss of its *sensibility* and *tonicity*. The fæcal mass, not being expelled as nature intended, becomes dry and hard from the absorption of water, and thus acts as a foreign body, causing both *pressure* and *irritation*, which not infrequently result in ulceration, abscess, or one of the many forms of rectal disease. The mass presenting at the sphincter being large and hard, the muscle is unable to *grasp and expel it*, consequently it acts as a direct *irritant* to the muscle, causing it to keep up a *continued spasmodic contraction* in its endeavor to expel it. As a result, the muscle becomes *hypertrophied* and very strong from this additional work; as a result of this it becomes a *barrier* rather than of *assistance* in the act of defæcation, so much so that the enfeebled bowel, together with the assistance of the powerful expiratory muscle, are unable to overcome the *spasmodic condition* and allow the presenting mass to be expelled, and what was once a *voluntary* obstruction becomes one beyond the power of the will to entirely remove. In many cases the upper part of the large intestine performs its duty while the lower portion refuses to act. Not infrequently, after the sphincter has taken on this *unusual* condition, a *purgative* will frequently act as an irritant. When the *external sphincter muscle* has been thoroughly *dilated*, one being careful not to lacerate it; it at once instead of acting as an impassible barrier offers only passive resistance, sufficiently strong, however, to prevent peristalsis, causing unpleasant accidents, yet not strong enough to resist the power of the expiratory muscles when brought into full play during defæcation. As a result

the large fæcal mass, which had collected, can be expelled, thus relieving the constant *irritation*, and the tonicity and sensibility of the bowel will again be restored, from the pressure being removed from the neighboring nerves.

Dilatation may be performed in two ways, either by immediate or gradual divulsion; the first to be done under an anesthetic, by inserting the two thumbs into the anus and stretching the muscle thoroughly in every direction. Gradual dilatation is selected in diseases where an anesthetic is deemed unsafe and where the patient's consent cannot be obtained to take the same. This is done by soft rubber bougies. I usually begin with a No. 6, unless the muscle be unusually tight, gradually increasing the size until a No. 12 can be introduced easily. This performance should be done two or three times weekly. It is well to pass the bougies regularly after the immediate divulsion, that the muscle may not regain its power too readily. I have frequently noticed that the withdrawal of the bougies was followed by copious movement of the bowel. This was probably due, not so much to the divulsion as to the stimulating effect of the bougie.

Abdominal Massage.—This I regard as a very essential feature in this treatment. Massage is quite ancient, having been practiced by Hippocrates. It was not until quite recently, however, that physicians at home and abroad recognized in it a powerful agent, and by giving it their scientific attention have lifted it out of the hands of "charlatans" and "rubbers," where it had long been left. I have been practising it extensively during the past two or three years, in connection with dilatation, in the treatment of constipation, and am of the opinion that it is a very valuable adjunct to the treatment.

With the patient in the recumbent position on a table which can be manipulated so that the head may be raised or lowered, that the intestines may be changed from one position to another, I make gentle but firm pressure with the palm of the hand and ball of the thumb, beginning in the right iliac fossa. I follow the course of the colon into the left, accompanying the pressure by kneading the parts thoroughly with the fingers. This should be continued for at least ten minutes and should be done every other day, or at least twice a week. It is well, also, to exercise the small intestines, if a loss of tonicity is suspected. The patient cannot do this himself, because every effort will be followed by contraction of the abdominal muscles which prevents deep manipulation. If the patient is unable to have a masseur as a substitute, I would recommend that he take a metal ball weighing from three to five pounds, covered with cloth to prevent chilling of the skin, and roll this over the course of the colon daily. Massage benefits the patient, first, by restoring tone to fatigued muscles; second, it loosens adhesions; third, excites the intestinal glands to renewed activity, altogether assisting normal peristalsis to take place.

Electricity.—Electricity has been highly recommended by many writers on constipation, and I have tried it with varying results. The galvanic and faradic electricity have both been used. One recommends one pole to be placed over the abdomen, and one over the spine. Another prefers one over the spine, and the other per rectum. While I do not have much faith in the use of electricity as an independent treatment, I do believe I have derived some benefit from it in connection with dilatation and abdominal massage. Its action is somewhat similar to that of massage, that of increasing muscular tone and glandular activity.

The other features in this treatment are to be carried out by the patient himself under his physician's directions. These, doubtless are more or less familiar to you all. The first and most important of these is the establishment of a fixed hour daily for the bowel to act. This may not be accomplished at first, but if the patient will persevere in going to the closet daily at the same hour, and devote his entire time while there to the expulsion of the fæcal contents and not make it a reading room, he will soon bring about the desired result.

Second. Another important feature which I insist upon, is that my patient take plenty of out-door exercise; and if he is so situated that he can attend a gymnasium, I recommend that he do so. There is little doubt that the Germans, who spend much of their time in out-door sports, suffer much less

from constipation than we Americans, who do not have time for such things, much to our detriment.

Third. Correction of the errors in diet. This feature is also essential to the success of the treatment. Foods known not to agree with patients should be discarded. Meals should be served daily at regular hours and under pleasant surroundings. A change in the diet is also required. This is too frequently demonstrated in schools and public institutions where a fixed diet obtains. I will not have the space nor time to lay down a fixed diet list, but will say that it should consist, in so far as possible, of easily digestive foods intermediate between meats on one hand, and milk on the other, and in children proportionately rich in fats, albuminoids and sugar, while poor in starches.

Fourth. Cold baths. If possible the patient should take a cold bath daily, followed by thorough rubbing of the skin with a rough towel. This assists in the treatment of the constipated condition, by stimulating peristalsis and opening the pores of the skin, that proper assimilation may take place.

Fifth. Dress warmly. It has been frequently noticed that the constipated condition gets worse during cold weather; this is partially due to the cold, and teaches us the necessity of dressing properly.

Sixth. Change of climate or occupation. It has been frequently observed that patients traveling from one portion of the country to another, or those who followed a sedentary occupation, become afflicted with constipation. Admitting this to be a fact, it seems obvious that in certain obstinate cases the condition might be improved by a change of climate, or, if necessary, of the patient's occupation.

Seventh. If plenty of water is taken during the day, it assists in alleviating the constipated condition, by softening the fæcal contents.

I now desire to briefly review the history of a few cases treated by the non-medicinal method.

Case No. 1.—Lady, aged 32, mother of three children, no hereditary or specific history; clerk for several years in large book concern. She came to me to be treated for chronic constipation; said she had suffered for three years from constipation, at times she would have only one action a week, when this occurred she suffered from severe attacks of headache, dizziness and nausea, especially when she stooped down to pick up an article; appetite poor, digestion impaired, all this she attributed to her constipated condition. Fæcal discharges dry, hard and difficult to expel. Had consulted a number of physicians who prescribed a number of remedies, some of which afforded temporary relief but not permanent benefit. At times she became stupid and inattentive to business, as well as melancholic, and she was uneasy lest she become worse and lose her position.

Examination revealed no local disorder further than a spasmodic condition of the sphincter ani. Diagnosis: Chronic constipation as a result of irregular habits, sedentary occupation and possibly the use of too many cathartics.

Treatment: Patient anæsthetized and the sphincter muscle thoroughly stretched. Patient ordered to remain in bed two days until soreness subsided; at the end of two days she returned to business, with instructions to return to my office every other day, that I might give her abdominal massage. She was then instructed according to a plan I follow out in the treatment of all cases of constipation, to go to stool at the same time daily, not eat stimulating, or highly seasoned food, and to take a glass of cold or warm water, or eat fruit every morning before breakfast. Her bowels moved naturally the second day, and from this time on her appetite was good, complexion better, and the headaches and dizziness were relieved. In this case the massage was kept up for four weeks, when she was discharged with instructions to return if she had any further trouble. Six months after this I met her and she informed me that she never felt better in her life.

Case No. 2.—Male, aged 40, occupation, fire-insurance agent; busy in office from early morning until late in the evening, gave the following history: His bowels would act frequently not more than once in two weeks. Of late he has become quite irritable towards his family and indifferent to business, which was unlike him. At times he

felt so melancholy that he contemplated suicide, but had resisted this desire on account of his wife and daughter. These melancholic attacks came on when an action had been deferred for several days, during which time he suffered the most severe form of headache. He further informed me that up to the time he entered the insurance office his bowels had moved regularly every morning.

Examination: Examination revealed no local disorder of the rectum or constitutional cause so far as I could detect. Accordingly I made a diagnosis of habitual constipation from irregular habits.

Treatment: Operation of dilatation, advised and consented to, which was performed as in previous case. After-treatment consisted of abdominal massage twice a week, alternated with the introduction of the soft rubber bougie, and usual instructions to correct errors in habits and diet. He commenced to improve immediately both in appearance and disposition, and his wife informed me that he was like a new man since the operation. This patient was discharged ten months ago and remains well up to date. He adheres most rigidly to my instructions.

Case No. 3.—Married lady, age thirty; married four years, no children, said she had been a slave to constipation for six years. She suffered much from ovarian troubles. Her physician informed her that she had a misplaced uterus. The most annoying symptom of late, however, was her inability to void her urine, independent of the catheter, which caused her much pain. Her physician wrote me a letter stating that, in his opinion, the constipation was due to stricture of the rectum.

Examination revealed an enlarged and inverted uterus, mouth of the urethra sensitive and inflamed; tenderness in the region of the ovaries; large fæcal accumulations in both sigmoid and rectum. I asked patient to void her urine, which revealed the presence of considerable pus, a small amount of blood, with an absence of sugar and albumen. I made a thorough digital and ocular examination of the rectum, but could find no stricture or other local disorder, further than a few fissures at the margin of the anus, which kept up the spasmodic condition of the sphincter.

Diagnosis: Constipation resulting from the spasmodic condition of the muscle, which was aggravated by the pressure of the fæcal mass on the intrapelvic vessels and nerves.

Treatment: I thought it best to try and relieve her of this constipated condition first, and if the uterine and ovarian symptoms did not disappear, I would refer her to one of my gynecological friends that she might have the *uterus tubes, ovaries*, and *other irritating* and *unessential* organs removed. Accordingly, patient anesthetized, and the sphincter thoroughly divulsed. Rectum and sigmoid flushed with soap-suds, which was followed by the discharge of a number of hard lumps of fæcal matter. The patient was placed in bed immediately after I had applied a solution of silver nitrate, grains twenty to the ounce, to the fissures. Every other day I introduced a No. 10 rubber bougie. The abdominal massage was given every other morning by a competent nurse. The bladder and ovarian symptoms began to subside immediately, but the urine had to be removed with the catheter for three or four days after the operation. At the end of three weeks, the patient voided her urine without pain. Fæcal accumulations had disappeared, bowels moving naturally every morning, while the bladder and ovarian irritations were entirely relieved, and I firmly believe they were due directly to the pressure of the fæcal accumulations. The abdominal massage was kept up for six weeks, at the end of which time she was discharged, feeling perfectly well. I received a letter from her eighteen months later, stating that she was doing nicely, and never felt better.

Case No. 4. Male, age thirty-five; came to me to be treated for chronic constipation, He had the ordinary symptoms which usually accompany this disease.

Treatment. Adbominal massage, dilatation, and galvanic electricity, one pole on the spine, and the other on the abdomen. Patient made a good recovery.

Case No. 5. Young lady, clerk in store, had become constipated since she had been in the store. Said the strongest purgative frequently failed to move the bowels, and when they did, the movement was unsatisfactory. Patient looked thin, complexion muddy, and digestion impaired.

Treatment. Dilatation, abdominal massage twice a week for four weeks. The patient was instructed to take an early morning walk, and to go to stool immediately after breakfast, and not to eat of any highly seasoned food. The result was an improvement from the beginning, and at the end of four weeks, when she was discharged, her appetite was good, her complexion much better, and the bowels moving of their own accord daily.

It would be unnecessary for me to enumerate more of these cases, all of which are more or less similar in detail. I will say, however, that I have treated during the past two or three years quite a number of cases of constipation by this method, taking them as they come, and the results have proven highly gratifying to my patient as well as myself. The results which I have obtained by this method of treatment, demonstrates to me beyond the possibility of a doubt that there is a method of curing many, if not all cases, of chronic constipation, independent of the use of strong purgatives, and the various medicines which are indiscriminately used by many in their endeavor to cure this annoying condition.

Book Notices.

Eighteenth Report of the Board of Managers of the Hospital of the University of Pennsylvania; for 1892.

The Treasurer's report shows receipts of over $100,000; and expenditures of nearly $90,000. 1348 patients were treated in the wards, and 7801 at the dispensary. The average expense per day for each patient was $2.02. Under the direction of John S. Billings this has become one of the best managed and disciplined hospitals in Philadelphia.

Elementary Physiology for Students; By Alfred T. Schofield, M. D., M. R. C. S.; Late House Physician to the London Hospital; Special Lecturer National Health Society. In one handsome 12mo. volume of 385 pages, with 227 engravings and 2 colored plates. Cloth, $2. Philadelphia; Lea Brothers & Co.

An attempt to condense the leading facts of physiology into the space of a quiz compend, and still express them lucidly. This is accomplished, as the author tells us, by omitting discussions, polysyllabic lists and authorities, and cutting down the descriptions of apparatus. For all these let us be duly thankful; especially the latter. Some of our modern text-books on physiology are padded out unreasonably, with details concerning apparatus, of only remote interest to the student. The latter has quite enough on his hands in trying to comprehend human physiology. The work is well done; the author has made a judicious selection of material, and has struck a happy style, concise but not dry. The book can be recommended for what he has sought to make it: an elementary work for students.

Original Investigations in Cattle Diseases in Nebraska. Southern cattle plague—third edition. Revised and Augmented with Many New Investigations, and the True Place of the Tick as a Vehicle of Infection Unquestionably Demonstrated. By Frank S. Billings, Director of the Patho-Biological Laboratory of the University of Nebraska. Animal Disease Series No. V. Lincoln, Neb.: State Journal Company, Printers, 1893.

The Disease of Inebriety From Alcohol, Opium and Other Narcotic Drugs. Its etiology, pathology, treatment and medico-legal relations. Arranged and compiled by the American Association for the Study and Care of Inebriety. N. Y., E. B. Treat, Publisher, No. 5 Cooper Union, 1893. Price $2.75. Cloth, 8vo, pp 400.

This is a book that needs no recommendation. It is what every practising physician wants; nay, what he must have. Thanks to the quacks, inebriety is now pretty generally admitted to be a disease rather than a crime, and a curable disease in many cases. The momentary success of the charlatans has set many a negligent doctor to inquiring what progress the medical profession has made in the matter; and in the book before us is recorded the answer. An attentive perusal will convince any reader of the truth of our assertion, made when the Keeley excitement began, that any capable physician who knew what the medical profession had done in this line could duplicate all the effects produced by Keeley, and give him "points."

Hypnotism as a Therapeutic Agent. A paper read by request at the twenty-third session of the Virginia State Medical Society, by William Lee Howard, M. D., of Baltimore, Md.

Dr. Howard believes in hypnotism; but Hart has given the death-blow to its practice.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
MANAGING EDITOR.

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HOMEOPATHY.

TWO essays upon homeopathy lie before us. One is by W. W. Browning, entitled "*Modern Homeopathy: its absurdities and inconsistencies.*" This is the essay to which Dr. Gould's prize was awarded; and the essay has been printed for circulation by physicians among the laity, "to disseminate more enlightened views upon the subject of which it treats." The essay is admirable in many respects. The tone is quiet and dignified, conversational rather than didactic; there is an entire absence of anything like personal abuse and the imputation of unworthy motives to the homeopathist *per se*. Dr. Browning's essay is just what one would wish to put into the hands of a friend who followed the homeopathic practice, provided he were really interested in the subject, and capable of appreciating the arguments presented. In our own experience, we find this class so small that we fear the usefulness of the essay will prove correspondingly limited.

The second essay is by G. Frank Lydston, and is entitled "*Homeopathy and its Congeners.*" Dr. Lydston handles his subject in a different manner. He cares not a whit for susceptibilities, but assaults his enemy with all the resources of his keen wit and brilliant eloquence. Telling hits, apt similes and comparisons instantly comprehended by even a slow-moving intellect fairly tumble over each other. But while he attacks the evil with all his force, he does what Browning fails to do,—he points to the remedy. "The dogma of infallibility is as inimical to the welfare of medicine as it has ever been to the progress of all science at the hands of orthodoxy. If it had not been for the refusal of rational practitioners to recognize, and consult with the practitioners of homeopathy, homeopathy would have been a dead issue long ago." "A difference of opinion never justifies professional ostracism." "Supposing a church should refuse admission to the unrepentant?"

As far as the homeopathist is concerned, we doubt if Dr. Lydston's arguments will have any more effect than Dr. Browning's, if as much. But he hits the nail straight on the head, when he charges the regular profession with the continued existence of homeopathy and other sectarian schools. It is easy to see how men get into irregular medicine. Guiltless of the slightest information concerning medicine, the youth follows the advice of whoever happens to be his preceptor, and goes to the school the latter recommends. If the student possess ordinary intelligence, when he begins to practice, it is not long before he finds his mistake. But what can he do? Nothing! If he leave his school, he cannot thereby get into fellowship with us, but stands isolated. To renounce all he has done, and go to a regular college for three years, to learn over again what he has already acquired (for they *do* teach the elements, and teach them well, at some irregular schools), is simply impossible. So that by barring out these men, we

perpetuate sectarian medicine; whereas, were we to do as Lydston suggests, let down our society bars to those qualified professionally, we would see a stampede that would take from the other schools all that now gives them weight and respectability. Some day this will be done; when a few more who think so will come out frankly and openly and say so, as Lydston has done.

Annotations.

The *Search Light* for March contains a portrait of Mr. Ernest Hart, editor of the *British Medical Journal*, with a brief biography. Mr. Hart was only thirty years old when he became an editor, and under his skillful management the journal has won a place second to no other in the world. His work in matters of sanitary science has been of the utmost value The provisions for the sick in workhouses, the public hospitals, the epidemics traceable to milk adulteration, and the army and navy medical services, are a few of the topics to which Mr. Hart has directed public attention, with good results. In all his work, Mr. Hart has had a most faithful and efficient coadjutor in his wife. Her work among the Irish during the famine, and in connection with the peasant industries of Connaught, have made her name a household word over all Ireland. Of the numerous foreign notables who are expected to visit this country during the World's Fair, many members of the medical profession will attend the meeting of the American Medical Association. Among these, we are informed, will be Mr. and Mrs. Hart; and none will receive a warmer welcome.

Dr. W. L. Zuill has resigned his professorship in the Veterinary Department of the University of Pennsylvania. As a practical veterinarian and a successful teacher, Dr. Zuill has no superiors.

Dr. W. F. Hutchinson has returned from his annual trip to the West Indes, hale and hearty; and our readers may soon expect to hear from him again—at least we trust so.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,
TIMES AND REGISTER,
1725 ARCH STREET, - Philadelphia, Pa.

PYELITIS.

PLEASE give me diagnosis, prognosis, and treatment in the following case: Patient aged 26 years, married, has two children, the last eight months old, a fine healthy child; still nursing. For several weeks the mother has been complaining of pain about her kidneys, but mostly of pain in the region of the left kidney. The pain then works around to the vesical region, and then retention of urine follows. About this time she suffers from cold chills and cold feet. After a while she passes through the urethra a white substance, streaked with a little blood. This substance resembles mutton fat; it is from ¼ inch to 1½ inches long, and from 1 to 3 lines in diameter, and is quite tough. After she passes this the urine flows all right, and she will be quite well for a few days, only complaining of a "lame back." Otherwise she is quite well. I hope to hear from you through the TIMES AND REGISTER at once. The TIMES AND REGISTER is a great help to me. E. W. D.

[Pyelitis of the left kidney. Give her salol, gr. v., thrice daily, and forbid all spices, condiments, volatile oils, and alcohol. Give but little meat, but plenty of alkaline beverages.—W. F. W.]

LOCAL ANESTHETIC.

I WISH you would give me a good local anesthetic that will relieve pain in extracting teeth; also for opening abscesses. I see advertised by some house the painless extracting of teeth. I did not send my dollar, as I think it is a humbug. Please give me a good anesthetic, without using an atomizer. How is cocaine? I have not been pleased with

it. Long life to the TIMES AND REGISTER.

Z. H. MILLARD, M. D.

THACKERAY, Ill.

[Nothing has taken the place of cocaine, although other drugs possess the property of inducing local anesthesia. Brucine and antipyrine may be mentioned, and perhaps a mixture of the three would be advantageous, as the brucine would counteract the sedative effect of the others upon the heart. At present, the best plan is to inject a strong cocaine solution (20 per cent.) into the gums.

ED. T. & R.]

ANTISEPTIC SOLUTIONS FOR INTRA-UTERINE USE.

PLEASE inform me about using the uterine syringe, the amount of fluid to be used at a time, the proportion of carbolic acid or other antiseptic, and if there is much danger. I think there is less than with the currette. What would you suggest in a case of retained placenta after its removal? J. G.

[I would prefer kresin or creolin as an intra-uterine antiseptic, using one to three drachms to the pint. The amount to be used is one to three pints. There is not much danger from these; but bad results have followed the injection of sublimate and carbolic solutions. For retained placenta, after thoroughly clearing out the uterus, wash out with the kresin solution.—ED. T. & R.]

ANTE-PARTAL HEMORRHAGE.

I WILL afford myself of the opportunity of getting some advice from your "Bureau of Information," relative to a case which puzzles me, and others to whom I have gone for advice. The patient, aged thirty years, in her first pregnancy, is very much prostrated and of low vitality, as she is in the last stages of phthisis.

She is in the seventh month of gestation, child "kicking," sometimes to such an extent as to cause distress.

Cough and expectoration are not so bad as formerly.

About two months ago, she had a hemorrhage; the os dilated sufficiently to admit a finger with ease. She was put at rest in bed, and morphine with camphor water given every two hours. The flow stopped and things appeared to be progressing naturally.

The same thing was repeated last month, and the result was the same. I was called two days ago, and found a profuse hemorrhage; the os was about the size of a half dollar, there was every indication of the termination of pregnancy. The flow subsided gradually, and at present has ceased entirely; the os being still dilated to about the size when first found. The patient is very weak and greatly prostrated.

What is it? What should be done?

I am satisfied there is no placenta prævia; hence I did not tampon. There is no polypus. R. R. C.

[The symptoms indicate a placenta previa, or at least a low attachment of the placenta. If not, there should be tuberculous ulceration to furnish the hemorrhage. On the next appearance of bleeding, the tampon should be applied, and retained until the head of the child expels it from the vagina. In the patient's condition, one would hardly care to risk any further loss of blood.

ED. T. & R.]

THE TREATMENT OF CATARACT WITH SUCCUS CINERARIA MARITIMA.

MRS. G., aged seventy-five years, has had cataract in the right eye for a number of years, to the extent of total blindness. She came under my care and observation on February 2d, 1893, for a chronic gastric catarrh, which has since been much benefited by treatment. The patient, even at that advanced age, wished to be relieved of her temporary blindness without resorting to an operation; therefore the experiment of applying a liquid to her eye to relieve her was suggested. The patient agreed; and the juice of cineraria maritima has been administered; two drops to the eye, three times daily, with the following results: Two weeks after the commencement of this treatment, she noticed the difference between light and darkness. One week later, she could distinguish the hand, when placed between her eye and the window. At present, she is able to distinguish the movements of the fingers before her eye, but is unable to count them. In this stage of improvement she has remained for some time now, without any additional benefit. The treatment is still continued, with hopes of entirely removing the opacity. I am anxiously awaiting complete recovery; but whether it is a fair trial for the drug, I am unable to state, as the patient is nearly blind in the left eye, from old age, I think, as no trace of cataract is noticed in that eye. I shall be pleased to hear from others who have tried this preparation, as there are

several other persons in this vicinity who desire the same treatment if it proves a success. E. B. WENNER, M.D.

MILFORD, PA.

PLEURAL EFFUSION.

I WOULD like to have your advice on the following case: March 9 I was called to H. M., aged thirty-four years, German, had always been hearty. His right pleura was full of fluid, the entire right side dull on percussion; no respiratory sounds but bronchial; bulging intercostal spaces, more prominent when sitting up, disappearing on changing position, heart sounds moved to the left; respiration thirty-six per minute, pulse seventy-two, temperature one hundred and two degrees, F., appetite fair, tongue clean, bowels moved by laxatives daily.

Treatment: Tonics, with blister and iodine ointment externally. He was gradually improving in his general health, until March 22, when the temperature ran up to one hundred and four degrees, pulse eighty-six, dullness only extending to the level of the nipple. He uses the lung above this point. Respiration twenty-four per minute; is quite anæmic, but the appetite remains fair. I called counsel to aspirate, but he would not advise it, but suggested the continuation of my treatment. This man has been a hard worker, is of spare build, and quite emaciated. I have put him on whisky, with malt and cod liver oil. He has expectoration occasionally, muco-purulent, with some prune-juice sputa. He has had no night sweats, chills or rigors; and sleeps all night. I do not give any drugs or nourishment through the night. The patient sits up over an hour twice a day. I have not gone into an extended description of the symptoms, only giving the leading ones. W. P.

[By all means aspirate and relieve the oppressed lung, if it be not too late. A microscopic examination of the pleural fluid should be made for tubercle bacilli. If found, wash out the cavity with antiseptic solutions.—ED. T. & R.]

FECAL ABSCESS AND FISTULA.

I HAVE a patient suffering from tubercular abscess of the mesentery and bowel. About Christmas the abscess broke externally, two inches below the umbilicus, and pus has been discharging ever since from the opening. A few weeks ago the bowel ruptured, and ever since, at times, fecal matter escapes from the external opening. The greatest trouble is to find some agent that will prevent the formation of gas in the intestines, as it causes intolerable pain. Morphine hypodermically seems to give the best results, in preventing the peristaltic movement of the bowels. The patient is taking Maltine and cod-liver oil, and general reconstructives, along with antiseptic washes.

Any light on the case will be gladly received. C. C. SNOWDEN, M. D.

DAVENPORT, Neb.

[Give sulphocarbolate of zinc, gr. v., every 2 to 4 hours, until feces are odorless; then lessen the dose as the case admits.—ED. T. & R.]

A STUDENT'S JOURNAL.

ARE there any medical journals published which are devoted principally to the interests of students?

If there are any which is the best?

CLARENCE J. SLOCUM.

[There are none. The Corpuscle is published by the students of Rush Medical College Chicago. The Hospital Gazette, of London, published for many years as a students' journal, has just given up that special field.]

MORPHINE ADDICTION.

I HAVE two cases of morphine addiction; one patient takes six grains daily, the other eight. The former is a female, the latter a young physician. I have tried what is used in the West here; chloride of gold and sodium, cinchona, etc., internally and hypodermics of strychnine, gr. $\frac{1}{60}$-$\frac{1}{40}$. I am now at my wits' end.

If you can suggest anything or any formula or mode of procedure, I will be deeply gratified. They both are residents of Chicago, and claim they can't well leave; both are in very moderate circumstances.

[This is a typical letter, of those that come to me every day. There is no miraculous specific for narcotic habits. Patients *must* make up their minds to leave their homes, and give themselves up to the business of effecting a cure, for six weeks at the least. Until they are willing to do this, there is no real desire on their parts to be cured, and it is simply a waste of time to worry with them.

W. F. W.]

TAPE-WORM.

HAVE you had any experience with pelletierine in tape-worm? If so, in what sized doses, how many, and how often do you give it? Do you give any preparatory treatment or purgative after it? I have a case that has defied everything else. Twenty to thirty feet of the worm passes, but the sly old fellow will not turn loose his head. Male fern, chloroform, ol. tiglii, etc, have been tried. I would like to try the pelletierine, but have had no experience in its use.

R. H. C. RHEA, JR.

[I have never used pelletierine, as no case has as yet resisted successfully a full dose of pumpkin seeds (four ounces), preceded by magnesia sulphate, accompanied by ether, and followed by croton and castor oils. Care must be taken in giving the seeds that the pericarp is given; for some give only the kernels.—W. F. W.]

Dr. M. J. Kenyon, of Decatur, Nebraska, describes a curious case of polyuria, in a little girl. The affection had resisted treatment by acetanilide, codeine, ergot and nitric acid, with strophanthus and cactus grandiflora for the irregularly of the heart's action. Constipation existing in a marked degree, all other treatment was dropped and strong cathartics given. When, at last, free purgation was established, the child improved in all respects and the polyuria ceased.

The Medical Digest.

A CASE OF SUPPRESSED MENSTRUATION.—R. L., aged eighteen years, came to my office with the following history, viz.:

Although of apparently good physical development, menstruation had never been normal, but, for the past three years had occurred at irregular periods of from three to six weeks, flow scanty, and accompanied by intense abdominal pain in the region of the ovaries and tubes; the pain was so severe as to cause, at intervals, for several days, marked attacks of syncope, followed by headache.

The case appeared to be one of acute amenorrhœa, and apioline was exhibited, in usual doses, for three weeks, when menstruation occurred. To her surprise and gratification, the discharge was profuse, accompanied with but slight pain, no syncope or subsequent headache.

The last two periods have been normal.

I am pleased to report the beneficial action of apioline in this obstinate case.—Arthur Rossiter Cobb, M. D.

EUROPHEN.—Since its first appearance in relatively recent therapeutics, europhen has been widely described as a perfect and complete substitute for iodoform, and, as such, it has been largely accepted by surgeons. It has been noted that its odor, though faint, is agreeable, and that it covers five times more surface than iodoform, the latter fact making it especially eligible in hospital practice. Its power, too, of adhering to wounds and forming a protective film over them, is dwelt upon by many practitioners, who note also the important fact that it is not necessary to renew europhen dressings so often as those of iodoform. But after all of these quite excellent and satisfactory qualities are named, there remains to be clearly stated the characteristic therapeutic virtues of europhen, or those qualities which make it superior as a topical remedy, to its congeners. As stated by late writers, these consist in the very decided and potent action of europhen; in its extraordinary power as a cicatrisant; in its stimulating influence over morbid conditions of the integument and of the membranous and other tissues. These qualities enable europhen to be of exceptionable service in such obstinate lesions as chronic ulcerations of the leg, or of the internal or external genitalia, as well as in the various luetic solutions of continuity. The same good points render it of striking usefulness in many of the dermatoses, so that, as stated by some writers, an obstinate cutaneous condition cannot be said to have received full treatment, until europhen has been tried. Of course, the widest applications of europhen will be to those operations in general and minor surgery which are so varied in their character as to make a special description of them impossible. Concerning the value of europhen in these conditions the testimony is very

complete and no reports have thus far appeared which would point to any irritative processes, or toxic influences as having been determined by its use.

RESTORATION OF THE FUNCTION OF MICTURITION.—*The British Medical Journal*, March 11, contains a paper on this subject by Reginald Harrison. He mentions his method of treating enlarged prostate with retention and inflammation. He first punctures the membranous urethra to reach the bladder. The prostate may then be dealt with (1) by dividing the bar; (2) by enucleating a portion; (3) or by stretching. A drainage tube is always introduced; and left for two or three weeks. Out of thirty-five cases, ten had the function restored. He adduces other evidence to show that this good result frequently follows prostatotomy and prostatectomy. A combination of ergot, cantharides and nux vomica often seems to assist the return of power; the former especially when long continued.

In the same journal, Buckstone Brown reports the case of a man, aged 70 years, who had used a catheter for 20 years. He submitted to prostatectomy, and had full natural power of micturition restored.

HANRIOT & RICHET report favorably on chloralose as a hypnotic. It is produced by the action of chloral anhydride on glucose. The hypnotic effect is felt in thirty to forty-five minutes. There was no depression and no sequel, except in two neurasthenic women, who had headache and faintness. Dose, three to six grains.

ETTINGER reports three cases of incarcerated hernia treated with ether; a teaspoonful poured on the tumor and the ring every ten minutes. The adjacent parts were protected by vaseline. The hernia was reduced after four to six hours etherization.

JURY states that pronounced aphrodisia follows the use of tablets of cocaine, made by an unnamed firm, which effect is not noted after the use of a cocaine solution.—*St. Louis M. & S. Jour.*

News and Miscellany.

Peculiarities shown by different diseases:

In Gout we have an abnormal "hastiness of temper" largely in excess of the pathological condition, and an accompanying expression of great irritation.

In Rheumatism the man is gloomy and despondent.

Emphysema gives us a patient melancholy and miserable in mind and expression; and the melancholia supervening an attack of "La Grippe" is one of the most distressing sequelæ of the disease, and has been largely commented upon, eventuating as it does, in many cases of suicide.

The victims of "Pulmonary Tuberculosis" is renowned for his cheerfulness and buoyancy, and will not believe that his days are numbered.

The list might be indefinitely extended; the stupid expression of the typhoid patient, the brilliant expression of Yellow Fever, and the "fierce, unpleasant look" of Exophthalmic Goitre (unfortunately not confined to this diseased condition), probably due to an increased vascularity at the base of the eyeball, the enlarged vessels pushing it forward.

WE'LL ACKNOWLEDGE THAT KAUFFMAN IS AWAKE.

!!!!!!!!!!!!

Our esteemed contemporary, the TIMES AND REGISTER, of Philadelphia, some weeks ago kindly called our attention to the fact that there was a journal published in that city called the *Medical Bulletin*, whereupon we immediately changed our name, dignifying and distinguishing our paper by calling it the *Chicago Medical Bulletin*. Of course we would have done that in the first place, but we did not know there was a *Medical Bulletin* published in Philadelphia and now we are told by Mr. TIMES AND REGISTER to wake up! Calls us sleepy! Just think of it. Dear old lethargic, logy, comatose Philadelphia telling us to wake up. Now, how in the world were we to know that Philadelphia had such a journal? Of course the T. & R. gets

into other states and we will wager that you are not native Philadelphians. It may be that like Rip VanWinkle you will wake up some of these years, rub your eyes and looking around you all dazed, say, "Where are we at?" Then again, there is a bright prospect for you as Chicago is thinking quite seriously of making Philadelphia—yes, that's the name—one of its suburbs, where its worn out citizens may go for a quiet rest, and be lulled into a restful, dreamy condition by the village bells and the contagious stupor quite indigenous to dear old, get-into-third-place Philadelphia. We know, Mr. TIMES AND REGISTER, that you appreciate our situation. As we said before; your excellent journal gets around and Dr. Shoemaker's journal must be a good one, but it is probably under the spell, and likely enough last January's number will come struggling into our office about the time the fair closes, panting for breath in its wild haste, and, bowing low will say thus: "Excuse my tardiness. I traveled very fast from Pittsburg on, but I was almost a year getting out of my native state." Come and see us during the fair. You come, too, Dr. Shoemaker. You know what the great Dr. Johnson said:

"Nor yet perceived the vital fled,
But still fought on, nor knew that he was dead.

—*Chicago Med. Bulletin.*

MONTHLY BULLETIN OF THE NEW YORK STATE BOARD OF HEALTH.—The average daily death rate for February was 334; that of January was 338, and the average for February for eight years past was 298. In February, 1892, there were 371 deaths daily, which was excessive, on account of 2000 deaths from grippe durthe month. There is an excess this month above the usual mortality in February, amounting to about 500 deaths, which was due to an increased number of deaths reported from acute respiratory and other local diseases, and was probably due to the continued prevalence of mild epidemic influenza, deaths from which are reported. The proportion of deaths from zymotic diseases is the same as last month, and the average for February, so also is the mortality in early life. Diphtheria caused 480 deaths, which is the smallest number since September last, and is considerably less than occurred in the early months of 1892. The prevalence of scarlet fever in the eastern part of the State continues, 198 deaths being reported from it, but there is a much smaller mortality from it than a year ago. The deaths from diarrhœal diseases is still higher by fifty per cent. than is usual at this season. There were 121 deaths from whooping cough, which is an unusually large number; most of them were in the Maritime District. Of twenty-three deaths from small pox, eight occurred in New York, two in Brooklyn, nine in Kings County Hospital for Contagious Diseases, three in Long Island City, and one in Gravesend. There were forty-one deaths from typhus fever in New York, and one in Long Island City. Of 9353 deaths from all causes reported, 7485 occurred in 149 cities, villages and populous towns, the death rate being 20.13 per 1000 population annually. For the rest of the State the death rate is estimated at 19.85, and for the entire State 20.07. In the urban portion of the State 14.33 per cent. of the mortality was from zymotic diseases; in the rural, 10.82.

DR. BRUSH'S

KUMYSS

"KUMYSS is, among the Nomads, the drink of all children, from the suckling upwards; the refreshment of the old and sick, the nourishment and greatest luxury of every one."—DR. N. F. DAHL'S report to the Russian Government, 1840.

I WOULD also allude to cases of diarrhœa and vomiting and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on KUMYSS, when the improvement was rapid and permanent. Very truly yours,

ARCH M. CAMPBELL, M. D.

Farm and Laboratory,

Mt. Vernon, N. Y.

The Times and Register.

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THE MEDICAL DEPARTMENT OF THE NATIONAL GUARD OF NEW JERSEY.*

By Lt. Col. E. L. B. GODFREY, M. D.

IN the re-organization of the National Guard of New Jersey, in 1869, a medical bureau was established over which the Surgeon-General was given general supervision, and endowed with power to pass upon the qualifications of applicants for the position of surgeon and asst-surgeon. This law secured to the National Guard competent medical officers, but did not give that untrammelled action that an efficient and scientific administration requires; neither was the law sufficient to keep medical officers abreast of the times in medico-military affairs. The military world has made great progress of late, and is still advancing. Unless the modern text is adopted and followed in all departments of the Guard, our efforts in the day of trial would prove futile, at least during the time required to unlearn the old and to learn the new. Filled with progressive ideas of the day, the medical staff of the National Guard of New Jersey has made still greater advances. A recent act of the Legislature provides that all surgeons, assistant surgeons, hospital stewards and members of the hospital and ambulance corps, shall constitute a *medical department* under the medical direction and control of the Surgeon-General, and that no one can be warranted or commissioned, assigned, detached or promoted in the department without the approval of the Surgeon-General. Professional qualifications are made to take precedence of military knowledge. It is important that this should be the case, for, while the military duties of the surgeon in the pomp and circumstance of glorious dress-parade are pleasing, how infinitely small are they in comparison with those greater duties that professional skill can alone fulfil. It is here that the medical officer must stand supreme, as often indeed he must stand alone, and just in proportion to the help given him by commanding officers in the discharge of his duties especially in sanitary matters, just in that proportion will the command to which he is attached be benefited by the exercise of his special knowledge.

The duties of a medical officer are military, professional and administrative. He is brought in contact, with every branch of service, and his responsibilities extend alike to the care of the wounded and the prevention of disease. The history of the Crimean war and the six million of cases in the late war show disease to have been deadlier than the enemy's bullet. Herein lies the greater duty of the medical officer,—to preserve the health of the command to which he is

*Speech delivered at the banquet given by the Sixth Regiment (N. J.) Armory Association to the Board of Freeholders of Camden Co., N. J., March 15th, 1893.

attached. For this purpose, there is usually assigned to the medical department, in time of peace, two per cent. of the active force of a command, which in time of war is increased to five per cent. But during battle as was the case at Gettysburg, nearly one quarter of the fighting force of the army required care from the medical corps.

During the late war, the necessities of the hour wrought out a good medico-military system, and towards its close, an ambulance corps was established which has since been copied by every civilized nation.

But still further and later advances have been made in the medical department of the U. S. Army. In the Army the Medical is one of the staff departments, and has a central organization. Its officers are organized into a corps, and belong to the medical department, and not to any line organization. The medical officer is assigned by the department to duty for a specified time, and makes his report both to his immediate commander and to the department. He holds his position not alone at the will of his commander, but at the will of the War Department. He has, therefore, an independence in professional matters that otherwise could not be given, and the field tactics governing the movements of the Medical, and the Hospital and Ambulance Corps, are drawn in recognition also of an independence in military affairs, in so far as the management of the medical department of a command is concerned. The result of this is that the medical department of our army, in point of scientific men, is unsurpassed by that of any army upon the globe, and nowhere can be found brighter names in the martial annals of any country than Barnes, Woodward, Billings, Smart, Sternberg, Sunderland, and others that might be mentioned.

The establishment of a Hospital and Ambulance Corps has done much to increase the efficiency of the medical staff of the army. The *personnel* of this corps is not borrowed by detail from the line, but directly enlisted, and before being assigned to any post each member is given six months' instruction in hospital matters. The men are trained in the manifold duties belonging to hospitals and taught to meet emergencies on the march and in the field. I have spoken, with some effort at detail, concerning the Medical department of the U. S. Army, in order that you may recognize the inspiration that has guided us and the high ideal aimed at in the establishment of a medical department in the National Guard of New Jersey. With a department established having power to control the commissioning and the promotion of medical officers and the enlistment of a hospital and ambulance corps for each brigade, New Jersey has taken a step in advance of any State in the Union in the adoption of modern medico-military methods. In securing this legislative action, the State Military Board and Surgeon-General McGill have not only done much present good for the National Guard, but have laid the foundations for bringing into the State service the best medical talent and providing the best facilities for executing their professional and military duties.

ASTHMA.

By ORRIN H. ROSSER, M. D.

THE subject for discussion to-day is one of the most perplexing of the many affections that come before us as physicians, inasmuch as to find any remedy or set of remedies, that will relieve all cases, has thus far been impossible. I am one who believes that sooner or later we will have for each and every affection a mode of treatment that will be a specific, for why should we only have for syphilis a specific in mercury, or for malaria in quinine? It took many years to bring about the knowledge of these two agents, while now with asthma we have no specific, yet we hope that it too will come under the specific plan of treatment. Many times we are called hastily to the bedside of a patient who seems just about to breathe his last. Family are nervous and excited, and our first duty is to give relief and comfort to the patient; and, on account of the difficulty sometimes experienced, we are ready to say that asthma is a distressing disease both to patient and physician.

Let us consider then the question: What is asthma? It is a disease because anything that is opposite ease is disease, yet while it is a disease, unlike pneumonia or

pleurisy, or other chest or lung diseases, it has no distinct pathogenic condition. Can we say at post mortem that the diseased tissue would indicate asthma? We cannot, for often post mortem reveals nothing but perhaps a slight amount of mucous secretion, otherwise the lungs appear normal as well as the larynx and bronchi. The bronchial secretions may easily be due not to the cause of asthma, or it may not have been the asthma, for many persons can have much more bronchitis and no asthma, so that while bronchial secretion is often present *it* is not pathognomonic.

One patient, an elderly lady who came under my care some months ago, suffered an attack of asthma every evening at or near ten o'clock. It made no difference whether she was lying down or not, or whether she had previously been asleep or not, it made its appearance at that hour. The attack lasted usually two or three hours. She had occasion to be in Watsontown for a week or ten days, and while she was there she was perfectly free from her old trouble and was feeling very well. This would lead us to think then that the climate or atmosphere was the cause of her trouble. This might be so in her case, yet were we to say that the atmosphere of Renova caused asthma we must find that this is the case in all residents of Renova, and Renova is comparatively free from asthma. Not only this but other persons who have had this trouble elsewhere are often free from it while in this locality.

This patient's asthma returned on the second or third day of her return, and for all I know is still with her, as she passed from my care soon afterwards. With this before us we must conclude that asthma may occur in any locality, but does not always depend on the locality for its cause, as we have cases who are free from it here, who have been afflicted elsewhere where others are free.

Authorities say it is a nervous affection, due to reflex action of the pneumo-gastric nerve, causing spasmodic contractions of the muscles of the larynx. Dyspepsia and constipation, then, would be a cause and often is the cause. Any affection along the course of a nerve may produce symptoms at another point on the same nerve or plexus of nerves. This we can see in hip-joint disease, pain is felt at the knee-joint; or in angina pectoris, pain at the elbow joint; or often in dyspeptic troubles, patient complains of pain over the heart, so we can see why an irritation at the stomach can be carried along the course of the pneumogastric nerve and produce the symptoms at the larynx that we call asthma. This may be true of any organs along the course of this nerve. Affections at any point may produce the chain of symptoms.

We see in Laryngismus Stridulus, a disease of childhood, almost an analogy of asthma, and one of the very worst cases I have ever seen was caused sympathetically by trouble with liver and bowels. A child about one month old was seized with a paroxysm suddenly one afternoon about one o'clock, that lasted until about 5 P. M. Several times I laid it down for dead, and it was only through our utmost endeavors that it was brought around. The trouble was corrected and the child has been free ever since.

Nor need the irritation be on the course of the pneumogastric nerve. It may be much farther from the throat and lungs. A case in point, as Prof. Atkinson would say, a lady, aged about 21 years, had been sick several weeks, and the late Dr. Canfield was called and pronounced the case one of phthisis, as well as her former physician in Clearfield County, Pa. I was called hastily one day to see her, as I was then the nearest physician, and found her in terrible distress. Breathing was very difficult, and was more of a gasp than an inhalation, and showed every symptom of asthma. I administered ⅙ gr. morph. sulph. with atrop. sulph. 1-150 gr. hypodermically and relief was promptly afforded. I was afterwards retained as her attending physician. Dr. Canfield, in the meantime, withdrew from the case and gave a very gloomy prognosis. She had many subsequent attacks. I treated them as best I knew how, but the relief afforded was but temporary, and no permanent relief was gained. She also developed an extensive bronchorrhæ. In fact, I was very much discouraged until, while speaking to her one day, she incidentally spoke of a runaway accident in which she was thrown out of the carriage and somewhat injured, although at the time it was not thought to be serious. As I was after a new course or

plan of treatment to use in her case, I "grasped at the straw," and asked her many questions as to the accident; and, too, I began to notice that about the time of her menstruation the paroxysms were much more severe. She had suffered womb trouble before she was sick, she told me. I asked her to allow an examination. She very readily consented. On examination I found the uterus partially prolapsed and retroverted. I replaced the uterus and introduced a temporary support and, to my surprise, in less than two hours all the symptoms disappeared, and she slept that night without the sleeping potion she had been using since she had been sick. This support only remained a few days when it became displaced, and all symptoms reappeared, and I was called, and she was gasping for breath. I replaced the support and all was well, and has been since then—now about one year. She has been wearing a Hastings supporter continually.

We can see from this that asthma may be caused from nervous irritation along the course of any nerve, but not nearly all persons who have dyspepsia or constipation, have asthma, but we name this as another cause. The inhalation of dust or irritating gases, or such substances as turpentine or ipecac, sometimes cause asthma. This can be readily accounted for from the standpoint of irritation causing an activity of muscles and therefore a spasmodic contraction of them by reflex motor action of its accompanying muscular nerves, producing asthma.

So, too, a bronchial catarrh from same cause can produce same effects by irritation. But not all persons who inhale these irritating substances have asthma, nor do all have it who have bronchitis. So after all, while these may cause the paroxysms of asthma, none of them are causes which may be pathognomonic of the affection.

Hysteria, again, is given as a cause, but hysteria has about an obscure a pathology as asthma. Nor are all hysterical patients asthmatical; so that leads us no further in our investigation.

We must conclude, therefore, that while we have the disease, and it manifests itself very markedly, yet there seems to be nothing of a pathological nature that we can say is pathogenic of the disease. As to the choice of victims, we find that, while women are usually more nervous than men, and this disease seems to be a peculiar nervous affection, some men are predisposed to it. It, too, seems to select a time, often during the early morning hours, or on retiring, just when we don't care for patients, and would rather there were no such disease as asthma.

So much, then, for causes; as to symptoms, it is hardly necessary to name them. Only, then, a few of the most prominent.

The first attack is usually abrupt, without any prodromal symptoms; each subsequent one seems to have more or less prodromes, such as bronchial irritation, constriction of thorax, coryza, etc., when follow the usual symptoms, such as a feeling of anguish, an intense desire for air, the muscles of inspiration are called upon and inspiration is but a gasp, and expiration is extended, lips are pallid, cyanosis deepens and death seems imminent; often there is a short rasping cough with slight expectoration. The paroxysms may be continuous, lasting one, two, or three hours, or may be intermittent.

Percussion reveals a hyper-resonance over both lungs, a vesiculo tympanitic note; Bamberger's bandbox tone.

Auscultation reveals a feeble or absent vesicular murmur, prolonged respiration, whistling, sonorous, wheezing or sibilant râles. As the paroxysm progresses, the murmur becomes distinct, moist râles take place of wheezing or whistling ones. The changes of these râles are no doubt due to irritation of bronchial mucus membrane, causing an excretion of mucus.

In treatment we have but two indications, relief and cure, or palliative and curative. The first, then, is to give our patient ease or relief from *disease*. This can often be done with the hypodermic administration of morph. sulph. with atropine; but often this plan is objected to, because it is morphine, and morphine *is a horrible drug*, you know; inhalations of chloroform, ether, amyl. nitrte, or the administration of chloral hydrat. Of course these are sometimes contraindicated by reason of idiosyncrasies of patient. In short, then, anything that will produce a

sedative action on the terminal nerves of the larynx and bronchi will give relief. I frequently administer in fifteen drop doses:

℞.—Tr opii camph . . . . . }
Spo. ether. co . . . . . } aa part. eq.
Tr. card. co . . . . . }
Every fifteen minutes until relieved.

One patient who comes very frequently under my care, and always about *2 A.M.*, I relieve with hot turpentine stripes over chest and throat. I can relieve this patient more easily by this means than any other. Five, ten, or fifteen minutes usually suffice to give relief.

Emetics would seem to be indicated, and Niemeyer says they have proved beneficial in many cases, but are very unpleasant to administer. Inhalations of the fumes of burnt saltpetre has been reccomended as well as fumes of burning ammon. chlorid. I have used, with partial success, the ammon. chlor. Inhalations of burning arsenic, are also recommended. I remember a case who came to me while in the office of Dr. Shoemaker in my student days. I saw in a paper called "*The Doctor*," a recommendation of using a drop or two of Fowler's solution on a cigarette and inhaling smoke. I tried it on a man who came in the store suffering acutely. He took two or three inhalations and it gave him prompt relief. I sometimes think that this patient in my student days received relief sooner and quicker than some do now.

But after all the thing to do is to produce sedative action to the muscles or nerves controlling these muscles to relieve asthma.

To cure the affection is not nearly so readily accomplished in many cases. If we can trace it to some organic trouble in other organs it can often be done. If atmosphere or surroundings or occupation seem to cause it they must be changed; a change in altitude often makes an improvement, especially if to a higher one, or from a damp to a dryero ne.

Among medicines there have been many produced. Nitrous oxide gas, compressed air, oxogen inhalations are very popular and produce good results, but the necessary apparatus is too expensive for many of our patients.

Arsenic is highly extolled. Indeed if we look at its results in chorea, we imagine it a specific; but to be of use it must be pushed to tolerance. Camphor, the bromides, valerian often prove beneficial in purely nervous asthma. Potassium iodide in five gr. doses one hour before meals has, in a few cases I have used it, proved good. To be successful it must be given on empty stomach, for when iodine comes in contact with starch the insoluble iodide of starch is formed and is inert. It should be protected by small doses of liq. pot. arsen. to preserve the stomach.

Pot. iodide is recommended by Armand, of Paris; Tanner, of London; Salter, of London; Iodine by C. A. L. Reed, of Cincinnati. Among others may be named, the oxide, valerianate and sulphate of zinc, squills, sanguinanria, nitrogen, sulphur, tobacco, grindelia robusta, coffee, assafœtida, salts of ammonia, belladonna, digitalis and many others. Niemeyer strongly advocates quinine.

These many remedies by as many authorities tell us that while they are all recommended in their particular cases, yet not one or any set of them will benefit all cases. We must study our cases and give each one its share of thought, and use the treatment in our best judgment suited to it, exercising at all times good common sense, with our present knowledge of drugs and remedies for use.

THE THERAPEUTICS OF GLYCOZONE, COMPOSITION AND CHARACTERISTICS.

BY CYRUS EDSON, M. D.

[Health Commissioner, Board of Health, New York City.]

GLYCOZONE is defined by its discoverer, Mr. Ch. Marchand, to be a stable compound resulting from the chemical reaction that takes place when c. p. glycerine is submitted, under certain conditions, to the action of fifteen times its own volume of ozone, under normal atmospheric pressure at a temperature of 0°C.

The necessity of using c. p. glycerine is imperative, as the presence of water or other foreign matter in the glycerine causes the production in the resulting compound of formic acid, glyceric acid, and other secondary products, that have a harmful effect upon animal tissues.

Glycozone has a pleasant, sweetish taste. Being hygroscopic it must be kept in tightly corked bottles, and, as long as it is kept in this condition, it does not deteriorate at a temperature of even 110 degrees F.

ANTAGONISTS AND INCOMPATIBLES.—Glycozone, like peroxide of hydrogen, is a powerful oxidizing agent, although its action is not as rapid or as energetic in this respect as the latter compound. Consequently, we cannot safely prescribe it combined with any other drugs or chemical substances. Contact with metallic utensils decomposes it. We must therefore use glass or hard rubber vessels and syringes when administering it.

PHYSIOLOGICAL ACTIONS. — When taken into the mouth and stomach glycozone causes a feeling of warmth. It excites a flow of saliva and stimulates the gastric secretions. Being hygroscopic it attracts to itself water from the surrounding tissues but not with sufficient power to effect harm. This property is due solely to the glycerine base which enters into its composition. In very large doses, one or two ounces, it causes a feeling of distress in the epigastrium and is followed by loose, copious, watery stools, which are accompained by severe cramps.

No effect is noted on the kidneys, the liver or the heart. Glycozone is undoubtedly slowly decomposed in the stomach, ozone being liberated and the glycerine uniting with the water from the tissues. The morbid elements with which it comes in contact probably hasten this decomposition, and in so doing are themselves oxidized and destroyed. The free ozone in the stomach resulting from the decomposition of glycozone aids the digestive process by its presence.

THERAPY.—Glycozone is in the opinion of the writer the best known agent for the treatment of gastric ulcer. It is also one of the best remedies for the treatment of the stomach, catarrh of chronic alcoholism, and for chronic gastric catarrh from other causes. It is excellent for atonic dyspepsia, and for acid dyspepsia. The writer has seen very gratifying results from its use in these distressing maladies.

In catarrhal and other stomachic diseases except gastric ulcer, the remedy is best administered in one to two teaspoonfuls in a wineglassful of water immediately after meals. In the case of gastric ulcer the dose and dilution should be the same, but it is better to give it when the stomach is empty, an hour or so before meals.

Glycozone has an excellent effect when used internally in cases of diphtheria. For this purpose a tablespoonful of glycozone is given in a wineglassful of water every three hours. As it is perfectly harmless it may be used without apprehension. The following treatment is excellent in cases of membranous croup: The nose, throat, mouth, pharynx, and larynx should be sprayed copiously every two hours or so with a mixture of one ounce of Marchand's peroxide of hydrogen (medicinal), with four to six ounces of water.

The membranes are readily destroyed, and by using this remedy freely, their reproduction is prevented. Then one teaspoonful of glycozone, diluted in a wineglassful of water, administered three times a day, prevents any disturbance of the stomach and regulates the bowels.

Remarkable benefit may be derived from the treatment of diseased conditions (ulcerations and chronic inflammation) of the rectum and lower gut, by enemata containing glycozone, and for this purpose nothing excels the following formula:

Glycozone	1 ounce
Water, lukewarm	12 ounces

This should be mixed immediately before using and administered with a hard rubber syringe once daily. It is frequently desirable to use a smaller amount than the above mixture. The proportions 1 to 12, however, should be maintained. In cases of fistula-in-ano and of rectal ulcerations low down, an ounce of lukewarm water containing a drachm of glycozone administered once or twice daily soon effects good, and in cases of ulcer, pure and simple, may be expected to radically cure the diseased conditions.

EXTERNAL USES.—After the cleansing of any diseased or suppurating surface by peroxide of hydrogen (medicinal), the application of glycozone stimulates healthy action and hastens the cure. For this purpose it has no superior in the entire range of therapeutics. It tends to check the discharge of irritating un-

wholesome secretions and to prevent the infection of the sore by pathogenic organisms. Its action in this respect is explained by the fact that it is both powerfully antiseptic and stimulant.

Follicular Pharyngitis, chronic coryza and ulcerative stomatitis are all benefitted by frequent applications of glycozone. As an application to ulcerated cervix-uteri and in tumefied conditions of the cervix and uterus it is far superior to pure glycerine.

In these cases, and for the cure of leucorrhea, the remedy should be applied on small rolls of lint, or absorbent cotton, the vagina having first been thorougly washed with an injection of peroxide of hydrogen one part, water four parts. This procedure should be repeated twice daily.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,
TIMES AND REGISTER,
1725 ARCH STREET, - Philadelphia, Pa.

I THINK the Bureau of Information department of the TIMES AND REGISTER is of priceless value, to those who are far removed from the medical centres. Long live THE TIMES AND REGISTER.

CHARLES C. SNOWDEN.

DAVENPORT, NEB.

SEQUEL OF CASE REPORTED.

IN reference to my letter of inquiry of a few weeks ago, published this week, entitled "Ante-Partal Hemorrhage," I would state that on the 1st inst. I delivered the patient of a full term child (nine months) which was dead.

The placenta came away without trouble, the case went along without any complications, and I dismissed the same after about ten days. It would appear that the question of "placenta previa" was "not in it," and that the "attachment" of the placenta was normal. Condition of lungs about the same.

The case was a very interesting one, and proved quite a trying one on the nerves of one who is not a "war horse" in the profession.

I thank you kindly for your prompt consideration and reply to my query, and you can rest assured that the next case I get with a "puzzle" attached to it, your Bureau of Information will be called upon for the solution, and the young M. D.'s, should congratulate themselves that they have such a means of general information from such a reliable source.

R. R. C.

PHOSPHIDE OF ZINC.—NASAL CATARRH.

WHAT dose of *phosphide* of zinc may be used safely and how frequently given? May *phosphite* of zinc be used in the same way and same size dose?

What is the best *medical* treatment for nasal or naso-pharyngeal catarrh—method of treatment and time necessary to cure? Please answer fully. We have a great deal of catarrh in this region, and would like to see a special number on it.

D. O. TAYLOR.

GREELEY, KAS.

[Of zinc phosphide the maximum dose should not exceed $\frac{1}{20}$ grain, thrice daily, midway between meals. Half this is enough in most cases. The phosphite is unknown to the most recent works on therapeutics. The hypophosphites do not replace phosphorus therapeutically.

Naso-pharyngeal catarrh is not directly amenable to medicinal treatment. If syphilis, anemia or struma underlie it, the diathesis should receive its appropriate treatment. Hydrastis is said to be useful in dry forms, lobelia in those with profuse secretion. The nasal douche with warm salt water, followed by the atomizer with variously medicated fluid petrolatum, are our best remedies.

W. F. W.]

Washington, we are told by a correspondent of the *Weekly Medical Review*, is so accustomed to handling crowds that she is making no extra preparations for the *Pan American*. May be so, but if she can take care of a crowd properly, she has acquired the art since the Ninth International met there.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
MANAGING EDITOR.

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PHILADELPHIA, APRIL 22, 1893.

PROPOSED PENNSYLVANIA LEGISLATION.

A BILL now before the Pennsylvania Legislature forbids the exhibition of monstrosities at public places like the Museum. We are not sure whether Mr. Fow introduced this bill because he feared the effect on the truly affectionate wives of his constituents, or because he considered the desire to see such marvels a form of curiosity so vulgar as to be forbiddable by law. In regard to the former, pregnant women are not compelled to go to see these shows, and those who have faith in the possibility of such sights influencing the unborn child had better stay at home. The exhibition of "freaks" has this one good feature; that it provides a comfortable living for many unfortunates, who would otherwise be physically disabled from self-support, and be a burden on their friends or on the community. Prominent members of the Academy of Natural Sciences have expressed themselves as decidedly averse to the bill; as in many instances the exhibitions are really educational. Many physicians visit them, to study the remarkable anatomical and physiological anomalies presented. As long as the shows are decent, and tending to add to the sum of public information, it is but a maudlin sentiment that would interfere with them. For a community to object to these and allow the Jesse James plays and French romances to go on without protest is assuredly to strain at a gnat and swallow a camel.

THE NEW MEDICAL EXAMINER'S BILL.

The bill at present under discussion has been accepted by the committees from various medical societies, and has passed both branches of our Legislature, with fair prospects of becoming a law. It provides for three examining boards: an "Allopathic," a Homœopathic, and an Eclectic; the personnel to be determined by the corresponding state societies. A supervising board is composed of the Lieutenant-Governor, Secretary of Internal Affairs, President of the State Board of Health, and the Presidents of the three state societies. As regards the duties, privileges and emolnments, the bill agrees substantially with that recently published by us. Four years of study are required of the candidates, one of which may be with a preceptor.

The bill is objectionable in several features. It it *not* the bill sanctioned by the State Society; and if we were now a member of the committee, we would not advocate this measure unless such endorsement were secured. The law gives official sanction to the two principal sects, and will probably create an Eclectic College. The three-board system has been tried in several states, and has not proved satisfactory in any. California has been endeavoring to get rid of it during the current session of her legislature. In general, the invoking of the legislative action has had the effect of drawing the lines sharply between the regular medical profession and the sectarians, and

of giving the latter a legal status they did not previously possess. We are sure that many regular physicians of this State will object to the present law, who favored that recommended by the State Society. Whether they will "speak out in meeting," or will remain passive, remains to be seen. Dr. Roberts and his associates, who are determined to have an Examing Board, of any sort, at any cost, will probably push their scheme through the societies, in the absence of any organized opposition. Fortunately, our laws are not like those of the Medes and Persians, and admit of repeal if they prove unsatisfactory.

Letters to the Editor.

A VERY INTERESTING CASE.

IN the Fall of 1892, I went with my sister, Mrs. L., to Philadelphia to consult some surgeon, concerning an affection of the knee ; from which she had been suffering for nearly two years, being unable to walk without the aid of a crutch. I never knew the exact cause of the trouble; thought it might have been due to the long continued use of phenacetine, which she had been compelled to take for about fifteen months, for very severe and excruciating headaches. Nothing was found to relieve her, but the phenacetine; and of that drug she took over twenty-five ounces. Her husband died nearly eighteen years ago, of consumption, but she never evinced any signs of having contracted the disease, nor had she cough or pain in the region of the lungs.

For several years, however, she has been afflicted with the worst form of hysteria I ever saw, or read of, having spells that required the strength of three men to hold her in bed, and always had to keep her from biting her tongue, by putting a *gag* between the teeth. By the combined use of bromidia and large doses of antispasmodics, she would usually get asleep in from three to four hours. These severe attacks ceased after her head trouble set in, and the headaches entirely disappeared after the *knee* became affected. A very strange link of changes, all more or less neurotic in their nature

Now to the most interesting part of my communication. I saw Professor W. W. Keen in consultation with Professor E.E. Montgomery. They pronounced the trouble tubercular lupus, and advised curetting and actual cautery, which was very skillfully done by Prof. Keen.

At the end of ten days we returned home, with the instruction to use calomel and zinc ointment. For a while the wound assumed a very healthy appearance, and all thought she would soon be well. Unhealthy granulation began to appear in a few weeks, to receive the proper treatment. No improvement, but on the contrary the sore gradually retrograded into the old condition; the other knee also becoming involved in the very same way.

After using peroxide of hydrogen and various other remedies, with no good result, I was induced to give my consent to the use of an ointment consisting of equal parts of linseed oil, sweet oil and red lead, boiled together for a couple of hours; the result being a black salve.

This salve was carefully made and applied by the woman who was to take charge, and cure the case. The salve was applied every day ; nothing else, except at my suggestion the occasional application of nitrate of silver. Some sarsaparilla was given as the internal treatment. The patient is now well; able to do her house-work, and enjoy life, as she has not done for years. Of course this woman flatters herself as having achieved quite a victory over the "regulars," but I must claim something for the nitrate of silver. In justice to Professor Keen, I will add that had she remained under his care, the cure, no doubt, would have been complete.

SULPHO-CARBOLATE IN TYPHOID.—For the first time in my practice I am using the above, with nothing else but occasional doses of opii et camphor. The effect is marvelous, and wonderful. The temperature reduced from 104° to 101$\frac{4}{5}$°, in forty-eight hours, and is running down. Tongue is softening and cleaning nicely. His diet is simply milk. I have treated a number of typhoid cases, but

never had one to do as well as the present one. Thanks to Professor W. F. Waugh, for having spoken of the remedy so often and so meritoriously.

G. B. SIMPSON, M. D.

WESTON, W. VA.

CORRECTIONS.

IN the issue of the 8th inst., the printers have made two mistakes, which alter the meaning of my short paper. In the answer to query No. 5, the word should be "Callaud," not calland.

In the final paragraph, it should read—"I have had most brilliant results in many cases where writers *decried* its use, as, for instance, in brain lesions." Most writers do not know its value in such a-f fections, and therefore cannot *describe* its use.

Dr. Newman states that I have given no figures in a letter to him, but I have in the last twenty years given statistics in various journals of more than two hundred cases, treated by myself successfully.

W. R. D. BLACKWOOD.

I NOTICE in looking over my communication "An Experience with Diphtheria," in THE TIMES AND REGISTER, March 25, the following errors:

On page 269, first column, twenty-first and twenty-second lines from the bottom, "Turpentine ʒ ss, Acid. carbol. ʒ ss," should read in the case of each "ʒ ss."

On the same page, second column, fourth line from the top, "ʒ j of syrupi sanguinariæ acet." should be "ʒj."

Page 270, twenty-third line from the bottom: "added gtt. x to each dose," should read "added *gtt. x tinct ferri chlor.* to each dose."

Page 271, twelfth line from the top, should read ʒ ij *every two hours*, instead of "ʒ ij" as it is in the print.

S. COOKE INGRAHAM, M.D.

Dr. Frank Billings has resigned the directorship of the Nebraska Patho-Biological Laboratory, and the regents are in search of a competent man to fill the position. As a bacteriologist Dr. Billings has few equals, and he enjoys abroad a reputation among the best judges of such subjects far greater than that allotted him at home.

The Medical Digest.

THE INTERNAL ADMINISTRATION OF ANTISEPTICS.

THAT surgery owes the great advance it has made within late years to antiseptics is a fact that no longer requires dwelling upon; and that the future of medicine lies in the study of the means permitting the free use of antiseptic substances internally, is a theory that is each day becoming more firmly established among the profession at large. It is astonishing that this field of investigation opened up some years ago has received comparatively so little attention from scientists and has produced as yet nothing very definite. It is a question of direct practical importance, as interesting in theory as in practice, and of which each detail as it is experimentally worked out in the laboratory can receive its immediate application at the bedside. The solution of the problem is infinitely more complicated than was the introduction of antiseptics into surgical practice, and it is only after very careful study and prolonged investigation that any definite result can be arrived at. But we should have thought that the difficulties to be overcome would in themselves prove an attraction for the great body of medical men who are now devoted to experimental research. The poisonous properties of the substances at our disposal, our ignorance of their remote action on the tissues of the body, and the difficulty of selection in each individual disease are only a few among the many obscure points surrounding the question. The doubt entertained by many as to whether the destructive action of these drugs or microbes is not equally detrimental to the human organism has furnished a plausible argument to the adversaries of internal antiseptic treatment. Professor Bouchard, of Paris, who is foremost among those who have studied the subject, pointed out in a communication presented to the Medical Congress of Copenhagen in 1884, and included in his recent book on pathogenic microbes, that the last objection can easily be overcome.

First of all, some substances which are inoffensive to man kill certain microbes, and inversely there are microbes that live

in solutions of substances, such as quinine, arsenic, and antimony, which would be poisonous to man. Again, in certain medical diseases, the infective agent is, at least for a time, limited to the surface of certain organs, and could be reached without impregnating with the antiseptic substance the entire human economy. Thirdly, he remarks, the aim of internal antiseptics is not to kill the microbe, but to prevent its excessive increase. In this lies the gist of the question. He states that all antipyretic drugs are antiseptics, and he inclines towards the belief that the action of quinine in typhoid fever is not a physiological action on the patient's organism, but a deleterious action on the germs which cause the disease. Carbolic acid, on the contrary, is a true antipyretic, its influence being physiological. We cannot complain of any lack of necrophytic drugs; there are a goodly number enumerated in all special works on the subject, and every day almost we are supplied with some new agent. The embarrassing question, even when the germicide antagonistic to any special microbe has been determined, is to decide on the dose and on the mode of administration.

On the Continent at the present moment doctors are strongly in favor of subcutaneous injection as the easiest and safest mode of introducing these powerful remedies into the system. Nor is it always by a sudden emptying of the syringe, as practiced in most cases of hypodermic injections, but by the use of much more complicated instruments, such as that devised by Dr. Burlureaux and Dr. Guerder for the administration of creasote in the treatment of tuberculosis. It is composed of a graduated glass recipient for the oil to be injected, and in which air is accumulated by means of a small pump; at the lower part is a stopcock, to which a flexible tube is adapted; to the other end of the tube the needle is fixed. Under the gentle and continued pressure thus obtained the liquid escapes drop by drop beneath the skin, the process occupying a considerable time. Professor Bouchard has done some valuable work in determining experimentally the doses of some germicides to be used hypodermically. By the therapeutical equivalent of a drug he describes the quantity reckoned per kilogramme of the animal's weight, which injected into the blood, does not cause toxic manifestations, but above which these symptoms would appear. Thus he finds that the therapeutical equivalent of carbolic acid is five centigrammes, that of creasote also five centigrammes, that of salicylic acid twenty centigrammes, that of aniline one centigramme, that of resorcin four centigrammes. These equivalents have been determined by intravenous injections on animals, which method he prefers to all others for experimental purposes on account of its precision, and he strongly condemns for the present any attempt at intravenous injections on the human subject. Antiseptics administered internally have been up to the present of the greatest use in the treatment of intestinal diseases, and in these cases their administration by the mouth is perhaps the best method. Of the various agents used, Dr. Dujardin-Beaumetz is of opinion that salol is the most satisfactory, while he condemns the naphthols as irrating. The salicylate of phenol does not become wholly decomposed in the intestines, and its toxic properties are comparatively small. Salicylate of bismuth is another remedy which finds favor with this author, especially in cases of dilatation of the stomach. In the treatment of tuberculosis the administration of internal antiseptics has been much less satisfactory. Notwithstanding the remarkable results that Dr. Burlureaux obtained by the use of creasote, he is obliged to admit that the drug is not a specific; but this is only one among the many drugs proposed at various times in this disease which have proved disappointing. That this important subject has received much more attention abroad than in England will become apparent to anyone who refers to its literature, and yet there are few questions in medical science more interesting both from a clinical and scientific point of view—*Med. Press.*

GERMAN NOTES

Translated by DR AD. MEYER.

An Objective Symptom of Traumatic Neurosis.—Dr. Oscar Roenig (Breslau) describes a symptom of anesthesia retinæ discovered by Foerster. In the

examination with the perimeter the field of vision is found larger when the test-object is moved from the periphery to the centre than when the test-object is moved from the centre to the periphery. As this test can be used in many different ways, simulation can be safely excluded.—*Deutsche Med. Zeitung.*

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HUEPPE ON THE HAMBURG EPIDEMIC. —When I first heard of the out-break of cholera in Hamburg, I did not believe that this disease would have a great chance here. I happened to arrive in New York on a Scotch steamer the day after the arrival of the first pest-ship; we just escaped quarantine. Then I saw the reports of Hamburg, and I could scarcely imagine that such an explosion was possible in a German town, in a country that makes so high pretensions in every way. Yet the reports which are in our hands now, show over and over again that there is a wide difference between mere pretentions and actually justified claims even among the Germans. The Hamburg epidemic showed such an extensive neglect in the administrational system, that we find no flattering explanation and no excuse for it Those who laugh at the vigorous attempts to do all that can be done for schools and for general instruction, will be inclined to find in the Hamburg experience an apparently strong evidence for the uselessness of very extensive public instruction. The wiser man, however, will take it as a proof that we are far from having removed all the rotteness and that there is no end of reform and improvement. At any rate it is a sad experience that thousands, especially in the working class, became victims of a careless administration.

F. Hueppe, the well-known bacteriologist of Prague, gives a remarkable report in the *Berliner Klin. Wochenschrift* on the causes of the epidemic and the experience obtained with regard to both public hygiene and treatment of the disease.

The contents of the sewerage flow into the Elbe just below Hamburg, and the tide carries them easily up to the place where Hamburg gets its water supply from the Elbe. The water reaches its destination without being passed through a central filter, even without a sufficient sedimentation in the basins of the water-works. Therefore every house has its little reservoir in which part of the dirt sinks to the ground and is retained. This arrangement has been proved to be a true incubator for germs in an epidemic of typhoid-fever (1885, 1886), and in 1889 a bill was passed which secured the necessary credit for the construction of new basins for sedimentation and of central filters, after a long struggle between a few progressive men and the tax-payers. The execution of the plans was so neglected, that the work was just in preparation when the epidemic came to give its cruel lesson. It has taught the world, largely at the expense of the working class of Hamburg, that the discovery of innumerable disinfectants does not make prophylaxis unnecessary and that this prophylais requires before all one thing: *the water-works of a city must be such as to exclude the very possibility of a contamination of the water.*

Whereas the first cases, August 17-23, were found chiefly among people who had drunk the water of the harbor, the disease spread rapidly after the 25th, and the greatest number of new cases (1102) was announced the 27th. The first diagnosis was made the 21st and the 22d, and the first *official* statement was published the 25th! We have no right to criticise this unfortunate delay. The rapid outbreak would have been too much for any authority, even in this country.

Hueppe is certainly right when saying that the knowledge of the cholera-bacillus, the too theoretical theory of the contagiousness of cholera through this germ and the absurdly optimistic belief in the almighty disinfectants, were the cause of the laziness of the Hamburg administration, and also the cause of the demoralizing feeling of inadequacy and of the panic both in official circles and in the public, when the sudden explosion had happened. As disinfection seemed to be ineffective, it was used with a sort of blind fatalism, where cool reasoning should have led to the chief source of the evil, and thus should have directed the measures taken. Moreover the fear of those dangerous bacilli had become so great that the patients were frequently

avoided and neglected. And all that because the theory of contagiousness had made the people forget that cholera is rarely transmitted directly, but that it spreads nearly exclusively through contaminated water and through food which has been soiled with such water.

We might enumerate the following four points which comprehend all the measures: 1. The contamination of the water has to be made impossible once for ever. 2. In cases of cholera or of *suspected* cholera the stools and all the things soiled with stool must be disinfected *at once*; if the germ is once beyond the next neighborhood of the patient, it is useless to hunt for it. 3. All the water used for any purpose (drinking, washing the hands, etc.), and all the food has to be boiled. 4. Quarantine, or rather the corresponding measures as used by the English and especially at the German-Austrian frontiers, have to be restricted to appropriate treatment of the cases of cholera and also of the suspicious ones, and further the *dirty laundry* has to be kept back, disinfected and sent to the address of the passengers. This is all that is necessary and also all that can reasonably be done without lessening the feeling of safety, either on the side of the passengers or on the side of the population. I mention here one example of disinfection as it occurs sometimes. Hueppe saw in a station a "disinfector" running about with a brush and with a tub containing chloride of lime and carbolic lotion, in order to paint the passengers coming from Hamburg and even the passing cars. Even if this little story is not quite historical, it contains a good deal of truth.

The second part of H.'s paper treats very fully the progress made in the bacteriology, pathology and treatment of cholera As it is to be hoped that the whole article will be translated and made accessible to American readers, I mention, here too, only a few of the most important features,

The cholera symptoms are the effect of a poison, which has the chemical characters of a peptone. The severity of the case is proportional to the amount of poison absorbed and not to the loss of water. For instance, anuria may occur, with apparently slight visceral symptoms. The fact that the cholera bacillus is saprophytic, i. e., lives and develops outside the human organism, in contact with air, is given as an explanation for the small risk of direct infection by the bacilli; which were weakened in the human body. The treatment of cholera receives very great attention, in a thorough critical review of what has been used.

Salol proved to be useful in slight and moderate infections only. Hueppe tried another salt prepared with a view to the same principles as salol, tribrom-phenol bismuth; and obtained very satisfactory results in every degree of the disease. He prefers it to calomel. Its action as a disinfectant is very powerful (in cases that died, no cultures could be obtained from the contents of the bowels at the p. m.); the bismuth neutralizes part of the poison and forms a beneficial cover over the denuded mucous surface. H. gives from five to seven grammes *pro die* in adults, the first dose one gramme (fifteen grains,) the rest in doses of 0.5 grammes. The patients who suffered with cholera of a slight and of a medium degree, were all cured. In the asphyxic stage, treatment with tribrom-phenol alone showed a mortality of 44.5 per cent. In many cases subcutaneous infusion of Kronecker's salt solution (natr. chlorat. 0.5 per cent and hydrate of potash 0 05 per cent.) was resorted to with transitory but frequently satisfactory result. Cantani's enteroclysis with large quantities of a hot solution of tannic acid is warmly recommended; opium has to be restricted to the cases in whom the diarrhœa is quite excessive, single drops of a solution of cocaine are administered to check the vomiting as far as it is deemed desirable. Hot and warm baths are of much benefit in the algid stage.

The mortality in H's barracks, to which largely severe cases were sent, was 34.6 per cent. (43 out of 124)

Hueppe's paper is by far the most concise and complete one I have found on the subject. It will be a valuable and necessary guide to every physician.

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On the Treatment of Hemorrhoids.—Delorme obtained favorable results with Whitehead's method: circular extirpation of the mucous membrane of the

rectum up to, and even above, the internal sphincter, and union of the upper border of the wound with the skin of the anus. *Reclus* has since modified this method. He makes the excision on both sides, or rather where the hemorrhoids are most developed, leaving the healthy part of the mucous membrane intact. He thinks he can avoid in this way second ary stricture. The oozing of the blood is stopped by an exact suture. The ampulla recti is filled with iodoform-gauze; the bowels are kept quiet by diet and opium for about six days; the seventh day the sutures are removed. R. Used cocaine for this operation; he performed it twenty-seven times, always successfully. In the ten cases examined later on, the final result was satisfactory. —*Centralbl. f. Chir.*

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Sudden Death in a Child —The late Prof. R. Demme reports on a child of ten weeks, that was nourished with cow-milk. Brought to bed in perfect health, the child was found dead the next morning. The post-morten examination revealed a coherent mass which filled the whole œsophagus and the pharynx, and also the entrance of the larynx. The child was no doubt choked during an incomplete process of vomiting, caused by the coagulation of the caseine. Hence it is advisable that little children should be observed for some time after drinking. Demme reports also on the use of phosphorus in rickets. He has found that it is of great value, especially in severe and complicated forms, where it acts better than any other method. (Kassowitz prescribes one centigramme to one-hundred grammes of oleum amygd. dulc.; if this causes diarrhœa he prefers an emulsion. Older children get it in cod-liver oil. This medication is interrupted only in intercurrent disorders of digestion and during acute diseases.—*Deutsche Med. Zeitung*.

FRENCH NOTES.

Translated by E. W. BING, M. D.

Garnier was charged with a medico-legal investigation, into the case of a man, arrested in the act of feeling the dress of women whom he followed on the street. It was at first supposed that the motive for the act was robbery. After a more attentive examination, it was proved that the man was under the influence of impulse, and that the touch of silk gave rise to pleasing genital sensations, which caused him to seek the gratification which the silk afforded him.—*Progres Medical.*

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"The Action of Cold on the Visceral Circulation" (Wertheimer).—The impression of cold on the nerve terminations of the skin, acts on the circulation in the kidney, as also, in the brain in the same way as any excitation whatever, mechanical or electric, acts on the sensitive nerves. The abdominal organs, and the intestines particularly, participate in the circulatory variations, in the kidney, of vaso-motor origin. This fact is of a nature to modify the usual opinion of the pathogenic action of cold and its therapeutic action in inflammations of the abdominal viscera. In the struggle of the organism against cold, the diminution of the activity of circulation in the abdominal vascular net work, aided by the contractions of the superficial vessels, reduces the loss of heat to its minimum. As the deeper organs lose heat proportionately to the quantity of blood which traverses them, it is clear that slowing of the circulation in the abdomen is advantageous in the maintenance of the central temperature. The balancing of the circulation of the brain and of the abdomen is, in this circumstance as in others, a favorable condition, when it causes the surplus of blood to flow towards the thermogenic centres. On the other hand, this mechanism explains better, perhaps, than any other, the danger of sudden immersion in cold water during work or while digestion is going on, driving the blood from the surface on to the nervous centres.

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Pathogenis of Tetanus (Courmont & Doyon).—1. The bacillus of Nicholaiev engenders tetanus by the intervention of a soluble ferment, which it produces.

2. This ferment, which is not toxic of itself, elaborates at the expense of the organism, a substance directly tetanisant, comparable in its effects to strychnine.

3. This substance is found in abundance in the tetanized muscles, also in the blood and sometimes in the urine.

4. It resists prolonged ebullition, whilst the bacillary products become inactive after heating to + 65° C.

5. It requires for its formation a favorable temperature. This explains the immunity of the frog in winter towards the ferment.

6. Natural and acquired immunity may be considered as the results of causes which hinder or arrest the fermentation.

7. It is probable that other microbic substances called toxic may act in the same way, and may, perhaps, be the explanation of the paralyses and other late symptoms of diphtheria.—*La France Medicale.*

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Paralysis Following Infectious Diseases in Children (Marfan).—A child of nine months presented chronic digestive disturbance, due to badly prepared food. There was an obstinate cough, with polyadenopathy, enlarged spleen, etc., signs of trachea-bronchial adenopathy. The child was then attacked with generalized chronic tuberculosis. It came into the hospital with varicella. This disappeared, but fever persisted, and the child was soon after attacked by paralysis of the left upper extremity—and abscess of the middle ear was discovered. If spinal paralysis of children is an infectious disease, it does not appear to be a specific disorder, since it may supervene after the most varied infections, as measles, scarlet fever, small pox, etc. Perhaps it is hereditary neuropathy, which explains the localization on the grey substance of a microbe, or its ptomaine.

General Pruritus —Chèron highly extols veratrine in general pruritus, as well as the localized pruritus of the menopause, either externally by local frictions or internally. Numerous physicians have repeated his experience with equally happy results. This is a new application, and we think it advisable to call the attention of the profession in general to it, on account of the intractable nature of the disease and the inefficacious nature of most of the remedies used at present. —Houdè, in *The Alkaloid.*

On the Operative Treatment of Trifacial Neuralgia.—The suffering produced by some forms of trifacial neuralgia are so great, the malady is so common, and generally so intractable, that any contribution to its literature will be welcome alike to physicians and surgeons. It is one of those complaints which, for many reasons besides its therapeusis, is common ground to both branches of our profession. Therefore, although the points I propose to speak of are purely surgical, they will, in view of the frequent failure of medical treatment in neuralgia, recommend themselves to physicians no less than to surgeons.

Technique of Operation by the Peripheral Method.—The operation is done as follows:

(*a*) The eyelids are stitched together by a point of fine suture inserted ¼ in. from their ciliary margins. This serves the double purpose of excluding irritating lotions from the eye, and of fixing the parts.

(*b*) The position of the infra-orbital foramen is then found; it lies in the course of a line drawn from the supra-orbital foramen to the interval between the upper bicuspids, a little inside the mid-orbital line.

(*c*) A curved incision is carried along the lower edge of the orbit and parallel to it; it should divide all tissues down to and including the periosteum. A vertical incision is made downwards from this for ½ to ¾ inch corresponding to the position of the foramen. The tissues having been dissected aside, the foramen is readily felt with a probe, and the nerve and artery found at their exit.

(*d*) The nerve should then be separated from the artery, seized with a clip-forceps close to the foramen, and divided on the distal side of the forceps. The artery, if necessary, may be tied; I did not find it necessary to ligature it.

(*e*) The periosteum of the floor of the orbit is next raised with a flat director, and as it is very thin, care must be taken not to tear it. Should it be torn, prolapse of the orbital fat into the wound takes place, and complicates the operation.

(*f*) The contents of the orbit are then raised from the floor by an assistant, using a retractor I have had made for the purpose.

(*g*) The upper boundary of the infra-orbital foramen is then removed with a fine bone-forceps, taking care to make the opening as small as possible, as if too wide the tissues of the lid may sink into it and produce disfigurement. The upper wall of the canal is then removed, either with a fine forceps or with a small director. This wall is so thin as to offer no resistence, and usually only covers the anterior half of the canal, which in the back part of the orbit is a mere groove.

(*h*) The nerve is then lifted from the canal by the attached forceps, and by working along it with an instrument such as that shown in the plate can be freed and exposed as far back as the pterygo-maxillary fossa without much trouble. If there be any oozing it can be checked by packing the cavity for a minute or two with pieces of hot sponge.

(*i*) The nerve may then either be divided at the foramen rotundum by fine curved scissors, or seized with a forceps as far back in the fossa as possible and avulsed from its basic attachment by a twisting movement of the forceps.

Conclusions.—1. That in the cases of trifacial neuralgia demanding operative treatment neurotomy is not usually a satisfactory or efficient operation.

2. That in purely sensory nerves stretching is at best but a tempoary expedient, and either should not be undertaken, or having once been performed and followed by a return of pain, should not be repeated.

3 That the reasonable treatment in trifacial neuralgia of an extreme character is neurectomy, and that while the operation on the divisions of the fifth nerve external to the cranial cavity may be regarded as an established procedure, the ultimate operation of removing the Gasserian ganglion must still be considered as on its trial.

4. That avulsion should only be practiced as a part of an open operation, and that, as originally proposed by Professor Thiersch, it should be regarded as a blindfold and unscientific proceeding, to be undertaken only when an open operation is for sufficient reasons impossible or inexpedient. — W. Thornley Stoker, *Dublin Jour. Med-Sci.*

ALBUMINATE OF IRON.—For two years past the following combination has given me extremely favorable results:

℞.—Pulv. ferri albuminatis . . . gr. ij
Acidi arseniosi,
Strychninæ sulphatis . . . aa gr. $\frac{1}{60}$
M. Ft., tab. (compressed) no. i.
Sig.—One tablet after meals and at bed-time.

Mr. ——, aged forty-eight, consulted me, complaining of great prostration, nervousness, irritability, inability to do a full day's work, shortness of breath, giddiness, poor appetite, insomnia, constipation and loss of flesh—all the result of an attack of influenza six months before. He was put on a diet of rich milk, cocoa, red meats, baked potatoes, eggs, oysters, and all easily assimilated foods, and instructed to abstain from pork, veal, cabbage, turnips, and all heavy indigestible articles of diet.

He took three tepid salt-water baths each week—at bed-time. Bowels were regulated with small doses of cascara sagrada and aloin in pill form. Improvement was noticed, and one week later he was placed on the above pill, four times daily, as directed. In two months' time he was apparently a new man; had gained twenty pounds in weight, and could do a full day's work without unusual fatigue.—W. Blair Stewart, in *Amer. Therapist.*

In the *Doctor of Hygiene*, for March, Cyrus Edson speaks as follows of "The Uses of Cod-Liver Oil in the Artificial Feeding of Infants:" "The objection generally advanced against the use of cod-liver oil is its nauseous taste. This has been removed by the art of the pharmacist and chemist, who have succeeded in making the oil palatable and even pleasant. This is not all that has been done, however, by these experts. By artificially emulsionizing the oil, *i. e.*, by imitating nature's operation in the digestive processes, they have produced a preparation that is very easily digested and assimilated even by the most delicate stomachs. Nor is this all. By combining the oil with the hypophosphites of lime and soda they add greatly to its value as a constructive food.

"Exactly how these hypophosphites act when taken into the system we do not know, but we do know that they pre-

vent waste of the tissues and that they promote what we call constructive tissue metamorphosis. This effect makes a given amount of food do a maximum amount of work. The best emulsion of cod-liver oil is, in my opinion, that prepared by Scott & Bowne, and known as Scott's Emulsion. This preparation I have found to be a carefully prepared emulsion of the best oil, combined with the hypophosphites of lime and soda. The dose for an infant should at first be very small, say from a quarter to half a teaspoonful after feeding, for a babe of three to six months and not given oftener than four times daily. Gradually this amount may be increased until the child takes a half teaspoonful six times in twenty-four hours.

"The effect of the oil on the bowels should be carefully noted and the dose regulated by the number of movements, their character, and the amount of oil contained in them."

Self-help when Drowning.—I have read of inflating the subcutaneous areolar tissue around the neck, by puncturing the buccal membrane opposite the wisdom teeth, and producing an artificial emphysema by the expiratory effort. The specific gravity of the naked human body is about 1,080. Every swimmer knows how easy it is to keep the body afloat, if the head is submerged. The reason lies in the fact that the head, volume for volume, is the heaviest part of the body. It would not require a very extensive inflation of the loose skin of the neck to enable one to keep the head above water, and thus float alive for a considerable length of time; more especially in river or sea water whose specific gravities range from 1.005 to 1.028.—Leonhardt, *Weekly Medical Review.*

Guaiacol Piperazine. — Mrs. B., aged 26 years, strumous, had a clump of enlarged glands under the left ear that had resisted treatment for three weeks. I dissolved half a grain of guaiacol-piperazine in hot water and injected into the centre of the largest gland. Severe pain followed, due to the guaiacol, that separated from the piperazine. Several days later the mass was somewhat smaller, but not a great deal. A week later, suppuration ensued, and the abscess was opened. The patient is now doing well.—W. F. W.

Chloroform as a Hæmostatic.—As a general hemostatic for the controlling of external bleedings, arterial, venous, or capillary, chloroform is most valuable. Applied on a dossil of lint or cotton wool to the bleeding surface, it promptly stays the blood, acts as a direct stimulant to the patient, and leaves no blood crust to fall off and recommence the bleeding. It is peculiarly suitable for all abdominal operations, as it has no tendency to excite inflammation either in the part to which it is applied or to any of the surrounding tissues.

As an antiseptic application it is more powerful than bichloride of mercury solution. The addition of gum resins has been suggested, but they would detract from the value of the application instead of increasing it, for the reasons which will occur to any person familiar with the use of solutions of gum resins.—*Med. Press.*

Treatment of Syphilis.—It has been found that syphilis can be treated by the simple application of mercurial ointment. Each night the patient applies on a certain part of the body one drachm of the ointment and covers with a piece of linen; no rubbing is needed. In the morning the part is washed. Chlorate of potash gargles should be used during the treatment as by the other methods.

Bronchitis in the Aged:—

Benzoic acid . . . . . 6 grs.
Tannin . . . . . 3 grs.
For one wafer or pill. Five daily.

Virulence of Tuberculous Expectoration.—M. Ducor related the case of three persons (the mother and two children) devoid of any hereditary antecedent, who contracted phthisis from living in a room inhabited two years previously by a consumptive patient. The bacilli of Koch were found on the paper of the walls of the apartment. The speaker concluded by saying that an expectoration projected into a corner of a

room dries and maintains its virulence for several years, and, according to the degree of virulence, the absorption of this tuberculous dust can give rise to phthisis or localized tuberculosis or scrofula. It is possible that the large amount of children affected with scrofula amongst the working classes can be attributed to this cause. Consequently too great importance cannot be attached to the disinfection of rooms occupied by consumptive patients.—*Med. Press.*

Book Notices.

PSYCHOPATHIA SEXUALIS, WITH ESPECIAL REFERENCE TO CONTRARY SEXUAL INSTINCT. A Medico-Legal Study. By Dr. R. von Krafft-Ebing, Professor of Psychiatry and Neurology, University of Vienna. Authorized translation of the seventh, enlarged and revised, German edition. By Charles Gilbert Chaddock, M. D., Professor of Nervous and Mental Diseases, Marion-Sims College of Medicine, St. Louis; Fellow of the Chicago Academy of Medicine; Corresponding Member of the Detroit Academy of Medicine; Associate Member of the American Medico-Psychological Association, etc. In one Royal Octavo volume, 436 pages, Extra Cloth, $3.00 net; Sheep, $4.00 net. *Sold only by Subscription.* Philadelphia: The F. A. Davis Company, Publishers, 1914 and 1916 Cherry street.

There is, to many persons, a morbid fascination in the study of the workings of the diseased intellect; and such study is by no means free from danger. As pitch may not be touched without defilement, so to familiarize one's mind with sin is to lose the keenness of our abhorrence of it. And when one learns of the depths of iniquity to which man may descend, ordinary vice becomes relatively respectable. Man must recognize that he possesses certain characteristics in common with the brute, but to look for manifestations of these instincts in every act, however trivial or commonplace, would make life simply unendurable. To see possible lust in every action, lurking at the bottom of every emotion, is to poison the well spring of life, to turn earth into hell. The existence of bestial impulses in man, the sexual enormities relating, as cause or as effect, with aberrant mental states, form a department of study that had better be left to a few specialists. The impulse to imitation is but too apt to be aroused. De Retz stated that his crimes were prompted by reading Suetonius' Lives of the Twelve Cæsars; a work that Krafft-Ebing's book goes far to explain. For these reasons we cannot recommend the work under consideration as desirable for a general practitioner's library, or one from which any knowledge is to be obtained that the reader would not be better without. To the medico-legal specialist it is invaluable.

HYDROTHERAPY AT SARATOGA. A treatise on natural mineral waters. By J. A. Irwin, M. D., etc. Cassell Publishing Co., N. Y.

This book is an endeavor to rescue the Saratoga Springs from the quackery with which the proprietors of most American mineral springs have enveloped them. Thanks to the lying claims put forth, nobody can tell what American water to prescribe with any accuracy; and consequently many an American invalid is sent to European spas who could better be treated at home, if one but knew where. Dr. Irwin's book is a step in the right direction. He gives some really valuable hints as to the selection of suitable water, the bathing and regime, for each of the maladies for which people resort to Saratoga.

News and Miscellany.

Lawson Tait says Birmingham is notable for the number of its liars.

Dr. T. Griswold Comstock has removed to 3401 Washington Avenue, St. Louis.

The West Penna. Medical College graduated a class of twenty-two on March 24th.

Marshall tried pancreatic extract on one case of diabetes, but it failed completely.

Tokio City, Japan, has over sixty specialists in ophthalmology among her physicians.

Bellevue granted 113 diplomas this year without any public commencement. A poor innovation.

Munich citizens have grown so fond of dog-flesh that steps have been taken to stop the theft of dogs for food.

A New York dealer in fraudulent medical diplomas was on April 7th sentenced to six months in the penitentiary.

Dr. Ernest Hart is to deliver the address at the coming meeting of the American Medical Editors' Association.

Strychnine and bromides may be given in combination, provided alcohol is added. Otherwise the strychnine is precipitated. —*The Apothecary.*

Our next issue will be devoted to *Food and its Adulteration.* It will contain articles upon *Milk*, *Salicylic Acid as a Preservative*, *The Chicago Water Supply*, etc., etc.

Leicester is having a great deal of trouble over the recent outbreak of smallpox. The anti-vaccinators find great difficulty in fitting the facts to their theories.

Having criticised the initial number of the *R. I. Med. Science Monthly*, we are in duty bound to note the great improvement in the general get-up of the March number.

The bacillus of diphtheria has been found in the pharynx five weeks after the disappearance of the exudation. The use of peroxide should, therefore, be continued for some time after apparent recovery.

The important news is cabled to the *N. Y. Sun*, that Koch has announced a cure for tuberculosis, administered by inhalation. It is unlikely that a new pilgrimage to Berlin will be inaugurated; at least, not to equal the last one.

An official of the Bell Telephone company committed suicide immediately after receiving his appointment. Probably the poor fellow had a conscience, and when he found he had to charge people $160 per annum for the use of a telephone, he took refuge in suicide.

Changes in the Medical Corps of the U. S. Navy for the week ending April 15, 1893: Surgeon C. G. Herndon detached from the Marine Rendezvous, New York, April 12th, and placed on waiting orders. Surgeon N. H. Drake ordered to the Marine Rendezvous, New York.

Health Officer Ware, of Chicago, says the system of inspecting immigrants arriving at that city is very near perfection. Chief Inspector Wiborg has eight assistants, one of whom is an Armenian. Each of them speak several languages, and between them they can master seventeen.

Dr. Edward C. Mann has enlarged his sanitarium for diseases of the nervous system by removing to a fine country seat at Flatbush, Brooklyn, N. Y.; twelve minutes in electric car beyond Park Place, where he has now additional accommodations and several acres of ground in lawn, shade and pleasure grounds for patients.

The N. Y. Med Examiner condemns the centrifugal method of preparing urine for microscopical examination. A specimen of urine was divided between two examiners. One employed the centrifugal method, found no casts, and insured the man; the other allowed the urine to stand twelve hours in a conical glass, found hyaline casts, and declined the risk.

In the *British Medical Journal* of April 8, Finlayson gives a paper on "Ancient Egyptian Medicine," illustrated by hieratic and hieroglyphic characters. It is interesting to compare the magical formulas given with those obtained from the Assyrian books, examples of which are to

be found in the present number of THE TIMES AND REGISTER, translated by Mr. Williams, from Oppert.

POOR CINCINNATI!—Has Cincinnati any cause for self-congratulation in the fact that the per diem expense of the patients in her municipal hospital is less than one-third of that of those in the Massachusetts General Hospital; about two-fifths of that of those in the Hospital of the University of Pennsylvania; about one-half of those in the Boston City Hospital, in the Roosevelt Hospital in New York, in the Pennsylvania Hospital in Philadelphia? There is that which saves and yet makes poor, that which spends and yet makes rich, for in a hospital limited expenditure means limited provision. —P. S. Conner, *Lancet-Clinic.*

CLEANING THE CELLAR.—In no part of the house is it so important that the cleaning be thoroughly done as in the cellar, writes Maria Parloa in a practical article entitled "When Cleaning House," in the April *Ladies' Home Journal.* Not a corner should be slighted. Begin with the furnace. Have the registers closed in every room. Remove all the cinders and ashes and clean out all the flues and pipes. Many housekeepers have the pipes removed, but the smoke-pipe is really the only one that it is necessary to take down. This pipe is liable to rust, because of the moisture it gathers from the chimney; nevertheless, if there be no way of heating and drying the house during a cold, damp period in summer except by building a fire in the furnace, it would be cheaper to renew this smoke-pipe every few years than run the risk of having the family made ill from receiving a chill. While the men are in the house to clean the furnace it would be economy to have them clean the flues in the range and also the chimneys. Open the cellar windows, to bring everything into the light. Have the coal bins cleaned. Brush everything free from dust. Now sweep the ceiling and walls as well as the floor. Brush the walls once more. Wash the windows and any closets, shelves or tables there may be in the cellar. Now have the walls white-washed. Before the various articles stored in the cellar are put back in place, brush them again. Sweep the floor once more.

At a meeting of the Joint Committee of the Chicago Medical Profession on World's Fair Entertainment, held at the Sherman House, November, 1892, the establishment of a Bureau of Information and Service was delegated with approval and endorsement to Chas. Truax, Green & Co., the Committee reserving to itself the duty of such social entertainment of visiting physicians during the continuance of the Exposition as may seem desirable.

This action was confirmed at the final meeting of the Joint Commiteee, Feb. 25, 1893, and on application of the Practitioner's Club and the South Side Medical Club, the matter of social entertainment was delegated to them, with full authority to act in the capacity of entertaining bodies, with the retention of the Chairman and its American and Foreign secretaries appointed.

Chairman, Dr. Charles Warrington Earle; Dr. Archibald Church; American, Dr. Geo. Henry Cleveland; Secretaries, Dr. John C. Cook; Dr. J. C. Culbertson; British, D. Sanger Brown; German, Dr. F. C. Hotz; French, Dr. Fermand Henrotin; Spanish, Dr. E. J. Gardiner; Italian, Dr. A. Lagario; Swedish, Dr. K. Sandberg; Canadian, Dr. R. D. McArthur.

The scope and duties of the above secretaries will be designated in the future.

C. WARRINGTON EARLE,
Chairman.

TREASURY DEPARTMENT.—Official list of the changes of stations and duties of medical officers of the U. S. Marine Hospital service for the five weeks ended April 8, 1893: Bailhache, P. H., surgeon, detailed as chairman of board for physical examination of officers revenue marine service, March 21, 1893; Sawtelle, H. W., surgeon, detailed as chairman of board for physical examination of officers revenue marine service, March 7, 1893; Austin, H. W., surgeon, detailed as chairman of board to prepare quarantine regulations, March 10, 1893; Gassaway, J. M., surgeon, to pro-

ceed to Ellis Island, New York, for temporary duty, then proceed to Cincinnati, Ohio, St. Louis, Mo., Cairo, Ill., and Memphis, Tenn., as inspector, April 3, 1893; Stoner, G W., surgeon, to inspect Hogg Island, Md., for quarantine purpose, March 17, 1893; Mead, T. W., surgeon, detailed as chairman of board for physical examination of officers and candidates revenue marine service, March 28, 1893; Carter, H. R., surgeon, detailed as member of board to prepare quarantine regulations, March 10, 1893; Banks, C. E., P. A. surgeon, to proceed to Halifax, Nova Scotia, for temporary duty, March 29, 1893; Kalloch, P. C., P. A. surgeon, granted leave of absence for ten days, March 24, 1893; Glennan, A. H., P. A. surgeon, to proceed to Vinegar Haven, Mass., for temporary duty, March 6, 1893; to proceed to Cairo, Ill., for duty March 22, 1893; Wasden, Eugene, P. A. surgeon, to proceed to South Atlantic quarantine station for duty, March 22, 1893; Carrington, P. M., P. A. surgeon, to report at this bureau for instructions preparatory to going to Hamburg, April 8, 1893; Williams, L. L., P. A. surgeon, detailed for duty in office U. S. Consul, Liverpool, England, April 5, 1893; Bratton, W. D., P. A. surgeon, to proceed to Buffalo, N. Y., for duty, March 6, 1893; McIntosh, W. P., P. A. surgeon, detailed as member of board for physical examination of officers, revenue marine service, March 6, 1893. Pettus W. J., P. A. surgeon, detailed for duty in office of U. S. Consul, Southampton, Eng.; Kinyoun, J. J., P. A. surgeon, detailed as a member of the Board to prepare quarantine regulations, March 10, 1893; Woodward, R. M., P. A. surgeon, detailed for duty in office of U. S. Consul, Rotterdam, Netherlands; Geddings, H. D., P. A. surgeon, detailed as recorder of Board to prepare quarantine regulations, March 10, 1893, detailed as member of Board for physical examination of officers and candidates, revenue marine service, March 28, 1893; Hussey, S. H., assistant surgeon, to proceed to Cincinnati, Ohio, for duty, March 21, 1893, granted leave of absence for thirty days, March 24, 1893; Perry, J. C., assistant surgeon, to proceed to Vineyard Haven, Mass., for duty, March 13, 1893; Young, G. B., assistant surgeon, detailed for duty in office of U. S. Consul, Naples, Italy, March 6, 1893; Brown, B. W., assistant surgeon, detailed for duty in office U. S. Consul, Genoa, Italy; Houghton, E. R.. assistant surgeon, detailed for duty in office U. S. Consul, Havre, France; Nydegger, J. A., assistant surgeon, to proceed to Pittsburg. Pa., for duty, March 6, 1893; Stewart, W. J. S., assistant surgeon, granted leave of absence for five days, March 8, 1893, to proceed to South Atlantic Quarantine for temporary duty, March 10, 1893, to proceed to Baltimore, Md., for duty, March 22, 1893; Strayer, Edgar, assistant surgeon, to proceed to Portland, Me., for temporary duty, March 29, 1893; Blue, Rupert, assistant surgeon, to proceed to Cairo, Ill., for temporary duty, March 7, 1893, to proceed to Galveston, Texas, for duty, March 22, 1893; Oakley, J. H., assistant surgeon, assigned to duty at Savannah, Ga., March 23, 1893; Norman, Seaton, assistant surgeon, assigned to duty at Evansville, Ind., April 8, 1893.

Appointments.—Rupert Blue, of South Carolia, commissioned assistant surgeon, March 3, 1893; James H. Oakley, Illinois, commissioned assistant surgeon, March 22, 1893; Seaton Norman, of Indiana, commissioned assistant surgeon, April 6, 1893.

Resignations.—Condict, A. W., assistant surgeon, resigned to take effect August 1, 1893; Hussey, S. H., assistant surgeon, resigned to take effect June 30, 1893.

CHALDEAN CHARMS—*THE MYSTERIOUS NUMBER, THE MYSTERIOUS WORD*—AGAINST THE INSIDIOUS DEMON.

[From the French of M. Jules Oppert's translation of a cuneiform text in W. A. I. iv. pl. 16. The notes and the bracketed enclosures are tentatives of the translator, J. Wylie Williams.]

O, Fate! barrier inexorable to human hopes[1],
Barrier [the gods themselves] cannot transgress,
Barrier of the heaven and earth impossible to displace.
Not any god can it o'ercome,
Nor god nor man can it explain.
Mysterious number[2] that one possesses not,
Against the demon it rises up;
Mysterious word which from the mouth emerges not[3],
Against the demon it explains itself,
Be it against a wicked *uduk*, wicked *alu*, wicked *ekim*,
Wicked *gallu*, wicked god, wicked incubus,

Against a *lamasat*, a *lambas*, or an *ahhar*,
A *lilu*, a *lilit*, or a slave of the *lilu*[4],
Against the bearer of the plague, fever pernicious, or diseases bad!
Sees one not during the floods of the god Ea,
That his number cabalistic bars the demon's way?
When he the bound'ry reaches by the god Nirba fixed,
That his word mysterious the demon's way estops,
Because he seeks the barrier to break through?
But the barrier impassable of heaven and earth,
He never will be able to displace.
Because to fear the gods he will not accede,
May the word mysterious of the gods arrest him!
May the hierarchy of the great gods curse him![5]
That it make him to enter the kitchen,
When he wishes to enter a house!
That it put him in an unknown spot,
When he touches another place!
When he stops himself at the door of a house,
That it lure him in one no exit having!
When to force the gates (and break) the bolts he tries,
That gate and bolts like adamant thwart him!
When 'neath the lintels he blows and through the windows,
When through the door, key hole he slips,
That they spill him about like water,
That they make him run like from a jug,
That they break him like a stick!
That when he crosses a door-step over,
May every feather be from him plucked![6]
And further yet—when on the [temple's?] architrave,
Himself he dares to perch,
May the neck of him be completely broke!
May the head of him wholly be off-twisted!

———[1]Fate is represented as the function of the goddess Mamit. It is not to be confused with the magical power of cabalistic numbers, mysterious words, secret names, etc., the invocation of which by the exorcist-priest in the form of a ban or curse (*Mamit*) was greatly dreaded. Even Nirba's boundary seems to need the ever-presence of his word to maintain its fixity. As the god of agriculture his boundary should be of a concrete rather than of a metaphysical order. Here he and Ea concern themselves to limit the empire of the ravages of the pest-demon. One would think that his activity could have been more judiciously employed in preventing the inundations of Ea, but the way of theological systems is never the way of science. Ea, as god of both river and sea, is the creator of the floods, which begin during April, when the melting snow from the mountains, north and east of Chaldea, arrives at the Persian gulf, and encounters the waters of the same violently driven landward by the monsoon that blows from the southwest from April to September. See Huxley, "Khasis-Adra's Adventure," in *Nineteenth Cent. Rev.*, June 1891.

[2]From this rendering of the great Assyriologist, one must infer the existence of a proto-Pythagoreanism among the Assyrians, maybe among the far more ancient Sumerian sacerdoce.

[3]A reminiscence of the days of the Medicine-man or Shaman-priest when the word was too awful for distinct enunciation and therefore required to be mumbled.

[4]The terms "wicked," "evil," "bad," etc., lack any moral import in these magical texts. Hostile, injurious, hurtful to the temporal man is all that is implied. In one text the *gallu*, the incubus, etc., will be called "evil," and in another be called "propitious" *gallu*, incubus, etc. In the present text, *uduk*=evil demon; *alu*=dazzling fiend; *ekim*=possessing demon; *gallu*=great one. One of the seven injurious spirits who possibly are identical with the seven gods of destiny, the Anuna-ge or spirits of the lower world, *i. e.*, the *lili* or ghosts of Scheol (Su-alu); wicked god = any god, for the time hostile to the man; wicked incubus—the nightmare; *lamasat=lamastu*, the female colossus, the creative spirit? *lambas*=lamassu, the (male) colossus? ahhar—messenger? *lilu, lilit*=the inhabitants of the ghost-world of Scheol, where their food is mud, and dust their drink. They are, with few exceptions as in the case of Ea-bani and Gilgames, always portrayed as inimical to man. The lilu=the male; the lilit=the female. Some texts speak of the *lilu* "who has no wife." of the *lilit* as "wife of the *lilu*." It seems the *evil* spirits have predilection for certain parts of the human anatomy, *e. g.* the *ekimnu* attacks the breast, the *gallu* the hand, and the evil god the foot.

[5]The great gods are fifty in number. The ban, curse (Mamit), or excommunication "once uttered with the appropriate ceremonies, binding of knots and the invocation of divine names, was a spell which even the gods were powerless to resist." This goddess, Mamit, is also called "the maker of fate" who "has fixed the destinies" of mankind, "along with" the spirits of the earth. The performance of certain rites, the repetition of certain words, and armed with the magic wand the priestly exorcist could invoke the aid of Mamit in pronouncing the excommunication. The power of invoking the deities was completely in his hands, and with the greatest frequency used for the protection of the mortal from the demons of disease, in which last instance, however, the particular rites employed were of a nature to compel the deity invoked to aid the patient. In this case, however, "the mispronunciation of a single word, the omission to tie a knot at the right moment, would invalidate the whole ceremony and render its repetition necessary."

[6]The composite creatures of the later mythology were an inheritance from the primitive totemism. A place had to be found for the colossal bulls with human heads and eagles' wings, for the hawk-headed genii, the "scorpion-men," the centaurs, etc. Many of these creatures were beneficent; but the majority belonged to those spirits against whom the sorcerer-priest had prepared his spells. Of the exorcisor himself, he is said to be "the spiritual predecessor of the regular [medical] practitioner."

In conclusion, I have to say that I have chosen Ea as the name of the god of primitive culture in place of Hea, or Kin: that "the magical texts formed the earliest sacred literature of Chaldea. They reach back to a period when, ... indeed, there was no definite conception of a god at all; . . . . . the purely Shamanistic stage of definite religious development. The prevention and cure of disease is the main object of the magical texts and incantations. Disease was looked upon, as it still is [among uncivilized peoples] as possession by a malevolent spirit." I am greatly indebted, in the compilation of these notes, to Sayce's "Hibbert Lectures" and also to his translations from Haupt's *Keilschrifttexte*.

COLLEGE OF PHYSICIANS OF PHILADELPHIA

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Original Article.

HIGH OR SUPRAPUBIC OPERATION FOR STONE IN THE BLADDER.

SURGICAL CLINIC

BY PROF. W. H. PANCOAST, M. D.

[Reported by Mr. Charles A. Read, Student of Junior Class, Medico-Chirurgical College of Philadelphia.]

A GENTLEMAN was brought into the clinic room from the hospital, on a stretcher, who is a farmer, Mr. C. W., in Bucks County, of this State; age, seventy-two years. Prof. Pancoast had examined him two weeks previously, before the large clinic class, several doctors being present, and found a very large stone in the bladder. This he said must have been forming for several years, and the patient should have attended to it sooner. The bladder was so contracted upon the stone that it was impossible for him to seize it, even with his smallest lithontriptic, so as to crush it. The jaws of the instrument could not be safely and widely enough opened to get a good hold of the stone without lacerating the bladder. The instrument would seize on several sides, but slip off without crushing it. The operator said this probably was a very large, hard stone, and oval or round, as the beak of the lithontriptic, while seizing it in different directions, would glide or slip off. The Professor said then that it was often a very nice question to decide in regard to a large stone, whether it was better to crush or perform a lithotomy. In bad cases, such as this, the shock was great in each case. He said: "I am examining this patient for the first time. I find him very feeble, with ossified or calcareous arteries, a feeble heart, a large prostate gland, with possibly much (venous) engorgement, an inflamed and most painful bladder, from the long pressure of stone; in fact, it is now no bladder at all, but an expansion of the urethral canal, not holding any water, which is its polite function to do, so that he can mingle with and enjoy the pleasures of society. The urine, as you see, flows continually. His dusky skin and confused mind show, I fear, that his kidneys are in a very bad condition. As you know from what I have taught you, any impediment to the discharge of urine, whether a stricture, or a foreign body, or a stone large enough to obstruct the flow, will back up the urine in the kidneys, and produce a distension of the pelvis and calices of the kidneys, the uriniferous tubules, and produce congestion of the glomerules of Malpighii. This may lead to inflammatory changes in the central part of the kidneys, a non-elimination of urea from the blood and uræmic poisoning. The patient is so weak, with such a feeble pulse, that I had the ether given, as you noticed, very carefully, as usual,

and only a small quantity. He cannot bear any further interference to-day without danger to his life. He suffers such exquisite pain, that if I could have crushed it, as I have often done in similar cases, I would have done so, to lessen the tension of the bladder, and get away all I could at one sitting by crushing and evacuating the debris, so as to give him some ease. As he can bear no more, with the consent of his physician I will send him again to his bed in the surgical ward of the hospital. He will be put under careful treatment, suppositories of opium in the rectum, aided by hypodermic injections of morphia and atropia as needed, soothing medicines for the bladder and kidneys, demulcent drinks and full doses of quinine, stimulating and easily digested nourishment, as broths, milk punch, etc."

This Wednesday, February 22nd, 1893, Prof. Pancoast brought the patient again before the class as above mentioned. He stated that it was two weeks since the students had seen the patient. He was so slow in recovering from his trip to the hospital, and weak, and his urine loaded with albumen, that for the first ten days it was thought he could not live, and he suffered such exquisite pain that his family feared to move him. But finally the last three days he has rallied, and to-day is his best day. He is anxious for some relief from his pain, and for the operation. The Professor said he preferred to operate upon patients when they had commenced to improve, and not when they were sinking. In the first place there was much more chance for success as they were mounting in the scale of health. By removing the surgical difficulty from which they were suffering and were being dragged down, they would improve still more rapidly; as a balloon, mounting in the air, will rise more rapidly as the sand bags are emptied out. The patient is anxious for the chance of help and relief from pain that an operation may give him, and will sink again and die rapidly if not relieved of his pain; he is entitled to have this chance. The patient was lifted carefully from the stretcher to the bed, his body well protected by covering, a hypodermatic injection of whisky and strychnine given, and etherization commenced. Prof. Pancoast told Dr. Bryan to have the ether given very carefully, and Dr. Gilmer to secure assistance to administer it, and to attend to nothing else. Dr. Gilmer constantly gives ether in his surgical clinic, and does so very successfully. The operator said he had given ether directly or by an assistant constantly since it was first introduced, in his father's practice and his own, several thousand times, and had never lost a case from it, but he was watchful and prudent. When a patient was fully etherized and stertorous, he always stopped the administration of ether, and waited until the effects had worked off somewhat before resuming it. If the patient is very violent under it, the Professor lets him come to himself and then resumes its administration.

When the ether is kept up continuously after the patient is etherized, the head becomes saturated with the vapor, and the patient becomes *ether-logged*. This phrase expresses the condition, the Professor said, like a piece of timber waterlogged and sodden. The patient does not rally so well, sometimes not at all, especially if there is congestive disease of the kidneys; and the condition is ascribed to the shock of the operation, when it is from a too great prostration of the nerve centres by carbonizing the blood to excess. While the patient was being etherized, the final aseptic preparations were made. The instruments were boiled, the abdomen and thighs washed again with the usual solution of bichloride of mercury, and the Professor donned his long, white linen operating gown, which differs from those of his assistants by buttoning in front.

While the patient was being etherized the professor gave an anatomical description of the position and relations of the bladder, and said that he had decided to perform the high or suprapubic operation; that the stone was too large to crush, as there was no room for manipulation with a lithontriptic in the bladder, too large to be brought out by the perineal section under the pubis, for this would require lithoplaxy, cutting into the bladder and then crushing it. This is a favorite operation with the Professor, and he had recently in the clinic performed this successfully on an Italian merchant, with a stone too large to bring through the prostate and out under the pubis. He performed the lateral operation,

put gently in his lithontriptic, crushed the stone in four pieces and removed them quickly and gently, occupying a very short time (it seemed only two minutes), followed by a rapid and complete recovery.

The operator also said that in this case, the kidneys being so diseased, the least shock possible must be inflicted on the bladder. As the arteries were ossified, the prostatic veins engorged by the long irritation of the enlarged prostate gland, cutting through the perineum was also very dangerous. The shock would be great, the hemorrhage might prove exhausting, and the little ossified arteries would gape and not bear well the ligatures. So he decided to perform the suprapubic operation, which avoids the other dangers, permits the complete removal of the stone, and with aseptic precautions and care in not injuring the peritoneum will be the safest operation in this case. The lecturer stated that he had performed a great many operations for stone, as it was one of his specialties. He had patients with stone at all ages and in both sexes. When the stone is friable, the bladder and kidneys in good condition, he preferred lithontripsy, washing out the bladder with the evacuating catheter and bag. This he prefers to do gently; treating the bladder as gently as he would handle an eye. He does not cut the meatus of the urethra unless it is absolutely necessary. It is the end of the squirt, he says, and needed to be narrow to make the manly bow in urinating. He does not like Prof. Bigelow's large instrument for evacuating; it makes the operation too rough and requires the incision generally of the meatus urethræ. He showed a small lithontriptic for children. His favorite operation in a good perineum with healthy kidneys is the lateral or bilateral perineal section. He has several stones he has thus removed. This lateral method drains the bladder so well and is such a natural incision, only requiring a knowledge of the anatomy and some skill, not to cut the prostate gland too far back, so as to avoid cutting the deep prostatic layer of the perineal fascia, which is continuous with the pubic fascia, and will cause peritonitis by infiltration of the urine; also to avoid the artery of the bulb.

The patient being now ready, lying easily at full length on the table, the operator first passed a sound through the urethra into the bladder. Then making a deep, quick incision downwards through the median line, from midway between the umbilicus and top of the pubis, he was through the abdominal wall and his aseptic hand in the cavity. The bladder, he stated, was contracted on the stone, and as far below the pubis as the superior ligament would permit. Now we saw the advantage of the sound being in the bladder. With his other hand pushing the sound gently, he pushed up the bladder, which was lifted up as much as the rubber water bag in the rectum could do. The operator said this facilitated very much his seizing the top of the bladder with his strong tooth forceps. Then incising the top of the bladder carefully with a new knife, from in front of the peritoneum to below the pubis, keeping back the peritoneum so as not to injure it, he passed the left index finger into the bladder and felt the stone. The operator said it was large, smooth and rounded generally, with some very rough points on it. With the right hand, the operator passed in a medium sized pair of stone forceps, his left holding the top of the bladder open and steady with the forceps. The stone was so imbedded and large that it would not come out readily, and the opening in the top of the bladder had to be carefully enlarged; and as the bladder was contracted and low down in the pubic cavity, this required some minutes of nice manipulation, and some time was required. Then the operator drew out a large oval stone, looking like a potato, smooth in parts, and with some rough knobs on it. The stone weighed 4⅝ ounces troy, and measured about 2x3 inches. The incision through the linea alba looked very small for the exit of such a large stone.

The operator washed out the bladder aseptically; and then pushed in gently through the wound, and through the incision in the anterior top part of the bladder, quite a large piece of iodoform gauze, which filled up the external wound completely, and came over the hypogastric region.

The patient rallied from the operation, and after being carefully wrapped up was transported to his bed in the hospital. The Professor said he would be treated

very carefully, anodynes and nourishing food given him, as he could bear them, and drainage made continually by the capillary action of the iodoform gauze, and that he would report the result of the case; that the patient would be relieved wonderfully of his pain, and it only remained to see how he would rally from the uræmic poisoning, and diseased kidneys.

Ten days subsequently Professor Pancoast reported the wound almost entirely healed. The operation had been of great benefit to the patient, but he feared a bad result in regard to his kidneys.

NOTE.—The patient recovered from the operation, but ultimately died from uræmia.

CLAM JUICE.—SALICYLIC ACID AS A FOOD PRESERVATIVE.

BY WILLIAM F. WAUGH, M. D.

PHILADELPHIA, PA.

SEVERAL years ago, my attention was directed to the value of clam-juice, as a food in certain conditions. The first was cancer of the stomach; and for this hint I am indebted to Dr. Thos. C. Stellwagon. In three cases of gastric cancer, and many of ulcer, I have found clam-juice relished and retained when all other food provoked nausea. In fact, in all cases attended with anorexia of the most severe type, it has become very customary to prescribe clam-juice. A gentleman, aged seventy, suffers with chronic cystitis and retention. Periodically, his stomach becomes disordered; he loathes the sight of food, vomits whenever he forces food down, and brings up large quantities of mucus. This condition is very familiar to those who have treated chronic cystitis. When it occurs, this patient is at once ordered bottled clam-juice and milk, equal parts; a teacupful to be taken, hot, every four hours. Next day he is able to eat any ordinary food.

For the disordered stomach following an evening's drinking, no remedy equals the clam-juice. A few cups, taken hot, without milk, will relieve the headache, settle the stomach, and put the victim in condition to attend to his ordinary avocations.

I have employed clam-juice largely in the treatment of opium and cocaine habitues. When the daily allowance is being cut down, a distressing state of debility occurs. Sometimes the nerves, relieved of the drug, become exceedingly sensitive, and the slightest causes occasion severe neuralgic attacks. For this pain the clam-juice often acts as a prompt and efficient remedy. For the insomnia of these subjects, it is also one of the surest remedies. Indeed, there are few cases of insomnia, except from plethora, coffee or over-eating, that will not be relieved by hot clam-juice better than by hypnotics. In convalescence from acute fevers, in the low stages of any acute affection, and wherever a quickly assimilable form of food is required, clam-juice is pre-eminently the choice. I have never seen an analysis of it; but, judging from its effects as seen clinically, it contains a form of phosphorus that is absorbed and transformed into vital force with unexampled rapidity.

SALICYLIC ACID.

In his work on fever, Hare tabulates eighty-seven cases in which toxic symptoms followed the administration of salicylic acid or its derivatives. Seven deaths occurred; the smallest quantity taken being 120 grains salicylate of sodium in six doses, two hours apart. Of the others, the smallest quantity causing toxic symptoms was fifteen grains of the soda salt, in one dose; while the largest single dose recorded was 825 grains of the acid, taken by mistake by a woman twenty-eight years old, suffering with "pleurisy, fever." The most common symptoms noted were collapse, cold sweats, giddiness, headache, and especially nocturnal delirum.

Unfortunately, at the time these cases were recorded, no distinction was made between the pure salicylic acid and the commercial. The latter contains impurities to which most of the toxic symptoms may be referred. Dr. Henry Leffmann kindly furnished me the following note.

"Prof. Charteris, of Glasgow, has carried out a series of experiments on rabbits, which may be summarized as follows:

"Salicin in thirty grain doses, natural salicylic acid in ten grain doses, and sodium salicylate (from the natural acid) in thirty grain doses, have no deleterious effects on rabbits weighing two and one-half pounds.

"Artificial salicylic acid in ten grain doses, and sodium salicylate (from the artificial acid) in eighteen grain doses, cause the death of rabbits weighing two and one-half pounds. Even the best specimens of the acid (artificial) sold as 'chemically pure,' proved fatal in fifteen grain doses to one rabbit. The dangerous effect of the artificial acid is due to the presence of creosotic acid, parahydroxybenzoic acid, and hydroxyisophthalic acid, from use of impure materials or errors in manufacture."

As a preservative, Kolbe found one part of the acid, added to 2500 of milk, prevented souring.

Bucholz stated that fifteen parts to 10,000 prevented the development of bacteria in ordinary organic mixtures. Prideaux found that one part added to 2000 of urine preserved it from change for two weeks; while one part to 1000 preserved it indefinitely.

Wernitz studied the action of salicylic acid on the digestive ferments. He found that one part of the acid in 7600 arrested the action of emulsin, one in 5100 arrested diastase; one in 1250, ptyalin; one in 9000, pancreatin; one in 2600, myrosin; one in 166, invertin; one in 250, pepsin, and one in 333, rennet. These considerations probably influenced the French government in interdicting the use of this acid, as its prolonged use, even in very small doses, is dangerous.

In Massachusetts the use of salicylic acid as a food preservative is forbidden, absolutely, in any quantity, great or small; and severe penalties are placed on dealers who keep salicylated articles in stock.

Hehner[1] states that salicylic acid is employed as a preservative for Bavarian beer; five grammes per 100 liters, for domestic, and twenty grammes for export.

In times gone by, when the causes of the decomposition of food were not understood, the discovery of a preservative was doubtless an achievement; but now, when we not only know these causes, but can prevent decomposition indefinitely by exclusion of germs, or by cold, without the addition of any kind of foreign material, we surely should make an attempt to discriminate between processes of preservation. Milan, Buenos Ayres, Berlin, Holland, Italy, Spain, Austria and Germany, have forbidden the use of salicylic acid in milk, beer, wine or other food products. Hehner closes his excellent article by urging the entire prohibition of all preservatives.

With this opinion we cannot but agree. No substance capable of preventing germ development in food, can fail to be injurious to the animal economy, when taken daily for long periods. Even were this not the case, the use of such preservatives should be forbidden, because they cultivate a tendency to carelessness in handling the food products concerned. If those engaged in their preparation realize that they must use only perfectly wholesome articles, and that the result depends on the perfection of their processes, the product will be what it should be; while if carelessness in the selection, cooking or bottling, may be covered up by antiseptics, the result will not be as good an article. In a large canning establishment, the manager requested permission to use salicylic acid, as some of the stock had been returned in bad order. Investigation, however, showed that the articles had been allowed to lie about until decomposition had set in, before they were sealed hermetically. Thus, the employees desired to cover up a monstrous example of carelessness, by the use of this antiseptic.

In regard to clam-juice, the use of salicylic acid is based on the following argument: This valuable food is prepared for the sick and sold in bottles. All that is required is to heat it to the proper degree, which can be done by the nurse, with a spirit lamp. For its convenience, the bottled juice is therefore employed almost exclusively. There is no difficulty in so preparing it that it will be perfectly sweet on opening the bottle, but as this may be used at intervals for perhaps a week, it is difficult to prevent decomposition after the bottle has once been opened. This, and the dispensing of clam-juice at soda-water fountains, is held to justify the use of salicylic acid; as without it toxic substances far more dangerous than the acid may develop in the clam-juice.

The quantity used is 4 ounces to 28 gallons of the juice. This makes less than

[1] The Analyst, Dec. 1890, p. 223.

one-third of a grain of acid to the half-ounce. From this small quantity it is evident that no toxic symptoms could result, the minimum dose recorded as causing them being fifteen grains. But even with this small dose, if repeated frequently, there would be an injurious influence upon the digestive function, especially if the impure commercial acid were employed. The high price of the natural acid has prevented its general use; but we now have a synthetic acid superior to the natural. Schering, of Berlin, supplies salicylic acid and sodium salicylate, snow-white, of an agreeable, non-acrid taste. Of several samples obtained from city druggists, not one compared favorably with Schering's; all, even Merck's, having the pink tinge and acrid taste denoting impurity.

If salicylic acid be used at all in clam-juice, it should be only under the following conditions:

1. Nothing but the purest acid should be used.

2. The presence of the acid, and its quantity, should be distinctly stated on the label, so that the customer may know what he is getting.

3. The salicylated juice should only be dispensed with the sanction of the physician, who is the best judge of its effects in each case.

4. For general use, a non-salicylated article should be furnished.

It would be much better if the manufacturers were to put up the clam-juice in small bottles, each containing no more than is ordinarily used in a single day. This could easily be kept sweet in an ice-chest, even in the hottest weather; and thus the only excuse for the use of salicylic acid would disappear.

A NEW TREATMENT FOR TUBERCULOSIS.

By SAMUEL G. DIXON, M D.

[Professor of Microscopical Technique and Histology, and Director of the Bacteriological Laboratory, Academy of Natural Sciences. An Address delivered before the Students of the Medico-Chirurgical College of Philadelphia, April 7, 1893.]

YOUNG men, this intrusion upon your regular curriculum of medical study, just now, when you are all hard at work preparing for arduous examinations, may not permit you to welcome the remarks I have to make regarding my new treatment for tuberculosis of the skin. However, as I was once in just such a perilous situation, I will be exceedingly brief, and therefore trust you will take a hearty interest in this, the most momentous medical subject of the day. This expression may sound exaggerated until you call to mind the fact that one-seventh of the deaths in the human family are caused by tuberculosis. For this reason I have devoted some years to the study of this heretofore almost unconquerable malady.

I expressed, in the *Medical News* of October 19, 1889, a probability of producing immunity by inoculations of an involution form of the tubercle bacillus. While engaged in that work, I discovered a toxic substance produced by or in the tubercle bacillus, which gave most satisfactory results when injected into animals suffering with tuberculosis. (Proceedings of the Academy of Natural Sciences, Philadelphia, November 18, 1890.)

This substance, since called tuberculin, was introduced into the human economy by Prof. Koch, the results of which are yet sub judice. Personally, I have not yet felt justified in using tuberculin in man. My hesitation is due to its extremely toxic nature, and from the fact that I gravely suspect the micro-organism to be capable of spore formation. If so, it is possible that it would grow when introduced into a predisposed tissue, while it would appear dead when placed in the circulation of healthy animals or those with artificially produced tuberculosis. This may account for the general miliary tuberculosis sometimes caused by its introduction into the circulation of man.

Having these possibilities before me when working with tuberculosis on the lower animals, my object being not only to cure consumption but also to produce immunity, I recognized the fact that immunity exists in animals which have not had tuberculosis nor been inoculated against the same. At least this would appear to be so in man when we consider the facts that one-seventh of our people have tuberculosis, while it is fair to believe that nearly seven-sevenths are exposed to the poison. This, most likely, is due to the difference in the constituents of the animal body, and yet we have been quite unable to recognize either by a microscopic or chemical examination any difference between susceptible and non-susceptible tissues. Therefore, we

are, while in this state of ignorance, obliged to look around for something that will indicate a possible difference and follow out any idea that has the least promise of rendering the body unsuited for the tubercle bacillus, or in other words for that which will change soil suited for its propagation and growth, to soil in which such growth cannot be effected. With this in view, and recognizing that animals leading a sedentary life and often fed on concentrated food stuff, frequently have sluggish livers; I proposed to throw the bile salts into the cellular tissues of tuberculous animals. The first results of this experiment I referred to as early as November 18, 1890, in the procoedings of the Academy of Natural Sciences of Philadelphia. The taurocholate and glycocholate of soda were used, principally the latter, as it is much more abundant in many non-susceptible animals than in animals susceptible to tuberculosis. These salts also should help in the assimilation of fats and consequently aid indirectly in the formation of new and healthy tissue. While these investigations with many others, which I will not now mention, were being worked out, I was looking around for pathological conditions not usually accompanied with tuberculosis, such as erysipelas and others. Gout, however, impressed itself very favorably upon my mind as a condition that might be temporarily produced without doing injury to the patient, and possibly change the soil of tuberculous man, as gout and tuberculosis do not often occur together.

The first results, based on the theory of the gouty condition being antagonistic to tuberculosis, were obtained in a few small animals referred to in my article entitled, "Reaction of the Amide-Group upon the Wasting Animal Economy," TIMES AND REGISTER, September, 1890. In these experiments I used each member of the group, creatin, urea, uric acid, etc.

Since my first publication of the use of taurin, creatin, urea, uric acid, etc., I have obtained some most flattering results. The action of taurin and urea on tuberculosis of the skin will be illustrated by a case, which I will show you to-day as it is under treatment by this group. Some of the patches of Lupus are practically dead. However, before showing you the case, I desire to call your attention to the fact that since I began to use urea, a vegetable substance which might be considered a modification of urea, has come into use abroad as a therapeutic agent for tuberculosis, and according to the reports is promising in its action. From the fact that it so nearly resembles that which I have used, with more or less success since 1891, I see no reason why it should not produce the desired change. My results coupled with the favorable reports regarding the action of this vegetable product, Thiosinamin, confirm the belief that the truth of my theory of changing the soil with these substances is now about to be confirmed, and we will be able from this on to treat successfully a large proportion of the cases of tuberculosis of the skin and possibly of the lungs.

While my theory has suggested the use of what I believe to be a remedy for tuberculosis in at least one of its forms, further scientific and empirical experience will likely explain the exact action of these substances upon the tissues affected with tuberculosis.

DIURETIC AND PURGATIVE WINE.

By JOSEPH JONES, M. D., LL. D.

NEW ORLEANS, LOUISIANA.

IN dropsy and general anascarca arising from organic lesions of the heart, and in Bright's disease of the kidneys, we have employed with benefit, the following diuretic and purgative wine:

℞—Fluid extract of jalap, . . . f ʒ iij
Fluid extract of squills, . . f ʒ iij
Fluid extract of jaborandi, . f ʒ j
Fluid extract of digitalis, . . ♏ xxx
Nitrate of potash, ... ʒ iv
Angelica wine, ... O. ij
M. f. s. a.
Dose.—One tablespoonful every three hours, until ordered to be increased.

This combination has in my hands acted as an efficient diuretic, reducing the greatly distended patient to the normal proportions. The angelica wine is a pleasant and supporting menstruum for the diuretics and purgatives.

Of course, I have employed many other diuretics and purgatives in the treatment of the various forms of dropsy, and at the present time desire simply to commend the above formula to the attention of my fellow practitioners of medicine, whose experience will be read with interest.

156 WASHINGTON AVE., COR. CAMP ST.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
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CHICAGO'S WATER SUPPLY.

THE *Lancet* of April 8, contains the report of its special sanitary commission of inquiry concerning the Chicago water supply. The report first speaks of the discharge of sewage, some fifteen per cent. going into the lake, but the bulk being pumped into the canal that carries it into the Des Plaines river, finally discharging into the Mississippi.

The lake water is pumped into the city mains, and goes directly to the consumer, without subsidence or filtration. Domestic filters are in common use; universally in the hotels. The lake water examined proved to be surprisingly free from chemical evidence of the sewage pollution. Save for suspended matter, it was much superior to that of the ordinary London water supply. Properly filtered, it is fit for any and every domestic purpose; unfiltered, it is unfitted for drinking, on account of the suspended matter. Hence, the security depends entirely on the care with which the water is filtered. The real danger, in the committee's opinion, lies in the use of impure ice, by which the water is rendered dangerous, after filtration. Visitors are advised to use no water that has not been boiled and filtered, that all possible risk may be avoided. These are the conclusions, supported by the details of the work, which seems to have been carefully and thoroughly performed. The investigation was most timely; and its results will go far to relieve intending visitors of their apprehensions. Coming from a disinterested source, the report has a value that would not accrue to the same investigation, if made by any native authority.

The report bears the ear-marks of its truly British origin, in such matters as making the Chicago water empty into the Missouri river, instead of the Des Plaines. Fortunately, the display of ignorance is merely geographical; the scientific work is irreproachable.

DR. DIXON'S REMEDY.

KOCH'S great discovery of tuberculin followed in due course, one year after Samuel G. Dixon had demonstrated the same thing. After the smoke of battle cleared away, the scientific world was found to have reached the position taken by Dixon originally. He now presents the results of a further investigation, in the shape of a remedy for tuberculosis in man. The remedy has been administered to one patient of the writer's for six weeks; and, *pari passu* with improvement in all other respects, the temperature of the patient has gradually sunk to normal. We, who have steadfastly upheld Professor Dixon's claims from the first, may be pardoned for some elation over the way in which our faith is being justified.

MILK.

MR. ABBOTT discusses the milk question from the standpoint of one who has studied it for years. His conclusions are based on actual observa-

tions and data furnished by the highest living authorities. Against this logical presentation of the facts, his opponents have as yet presented the public nothing but arrogant assumptions, gross personal abuse, and unsupported assertions; whose extravagance leads one to believe that these gentlemen cannot possibly have made a study of their subject.

Still, the purity of our milk supply is too important a matter to be neglected, and deserves the attention of our legislatures. Dr. P. D. Keyser, of the Board of Health, has made the suggestion that skim milk should be dispensed in blue cans, so as to be distinguished even by the most ignorant. A distinction should also be made between ordinary skim milk and separator; and, if possible, when milk falls from natural causes below the average, the customer ought to know it. In fact, every effort should be made to secure to the customer just what he is paying for. Further than this, the hygiene of farm-yard and dairy, as Mr. Abbott remarks, are of greater import than the ratio of milk solids. Curiously, neither of the milk bills introduced deals with the causes that were in operation when Vaughan discovered tyrotoxicon. That was due to the milking being done at noon, and the milk sent by wagon, in the heat of the day, to the hotel where the epidemic occurred.

Special Article.

MILK LEGISLATION.

VARIABILITY OF MILK SOLIDS—HONESTY NO SAFEGUARD—NO SANITATION IN "LEGAL LIMITS."

UNDER existing laws in the City of Philadelphia it is unlawful to sell, or have in possession for sale, any impure, adulterated or unwholesome milk. The addition of water or ice, or of any other substance or thing, constitutes an adulteration. And milk produced from cows fed upon distillery waste or upon any substance in a state of putrefaction or rottenness, or upon any substance of an unwholesome nature, or that has been exposed to, or contaminated by the emanations, discharges, or exhalations from persons sick with any contagious disease, or milk from tubercular cows, is declared to be impure and unwholesome.

The burden of proof is put upon venders of milk; they being obliged to ascertain the character of the milk in all these particulars so far as it is possible so to do. The laws now in force do not, however, fine and imprison defendants if they prove to the satisfaction of the court that they could not possibly obtain said information. It is this little shred of justice that is so much objected to by the inspecting officers, who want that juries shall be obliged to convict all that are accused, irrespective of actual guilt or innocence, citing as an excuse for their request that, in parts of our country, such stringent legislation exists. It is true that some very unwise and unjust laws affecting the sale of milk have been enacted in a few of our states, and such legislation is in striking contrast with the intelligent, equitable and efficient laws that are in force in Europe. Unfortunately the legislators who enacted these laws had ill advisers, by whom, being misinformed and misled, they were induced to enact such measures as their prompters thought would be most convenient for enforcement, without the slightest regard for justice or scientific truth.

The milk acts alluded to contain three features that have been steadily rejected by other enlightened governments as unjust, unintelligent, and not economic: First, in that they render parties accused of a penal or criminal offense liable, irrespective of intent or of a guilty knowledge; Secondly, in that they establish legal limits for solids in milk, though a natural product of extreme and unavoidable variability; at the same time making the limit so high as to place producers of and venders in milk entirely at the mercy of the inspectors; and Thirdly, in that they have in some instances prohibited the sale of skim milk, and in others so encumbered its sale by unreasonable and difficult requirements as to occasion a curtailment of its use, or its practical prohibition.

The imposition of fine and imprisonment because of an ignorance of facts, not an ignorance of the law, is a hardship under any circumstances, but in the case of milk it is doubly so, because being of a perishable nature, and there existing a necessity for serving it while fresh, it is practically impossible to secure an analysis in advance of sale. To thus require an impossibility, and to punish for non-performance, is tyranny.

Persons charged with robbery, incendiarism, counterfeiting, and the like, are, when upon trial, given the benefit of every doubt, and are considered innocent until proven guilty. But this special milk legislation reverses this order, and, though the penalties are the same as for felonies, yet the defendant is held to be guilty until he proves his innocence and is then further wronged by being denied the opportunity to do so.

The British Adulteration Act under which milk prosecutions are conducted in Great Britain provides, "That no person shall be liable to be convicted under either of the last foregoing sections of this Act in respect of the sale of any article of food, or of any drug, if he shows to the satisfaction of the justice or court before whom he is charged that he did not know of the article of food or drug sold by him being so mixed, colored, stained, or powdered, as in either of those sections mentioned, and that he could not with reasonable diligence have obtained that knowledge."

The Massachusetts *general* Adulteration Act introduces the word "knowingly," for the protection of *innocent* holders for sale of adulterated foods or drugs, but in its special milk act this word is stricken out.

The Pennsylvania general Adulteration Act provides that, "If any person shall sell or expose for sale the flesh of any diseased animals, or any other unwholesome flesh, knowing the same to be diseased or unwholesome, or sell or expose for sale unwholesome bread, drink, or liquor, knowing the same to be unwholesome; or shall adulterate for the purpose of sale, or sell any flour, meal, or other article of foods, any wine, beer, spirits of any kind, or other liquor intended for drinking, knowing the same to be adulterated; or shall adulterate for sale, or shall sell, knowing the same to be adulterated; any drugs or medicine, such person so offending shall be guilty of a misdemeanor, and upon conviction be sentenced to pay a fine not exceeding one hundred dollars or undergo an imprisonment not exceeding six months, or both, or either, at the discretion of the court."

Yet in the Pennsylvania Milk Act affecting cities of the second and third classes, the word "knowingly" is stricken out.

Why these invidious distinctions,—not requiring knowledge where it is possible to obtain it, and requiring knowledge where it is impossible to obtain it? Is the purity of a drug of less moment than that milk should be free from adulteration? The adulteration of milk is to be condemned as a fraud, and when proven, should be punished in like manner as is other food and drug adulterations.

In the U. S. Department of Agriculture, Division of Chemistry (Bulletin 25, p. 32), appears the following quotation from Dr. Faville: "While we do not like the idea of buying water for milk, it is surely no more repugnant than buying sand for sugar, or any other adulterated food."

Nearly all the milk inspection in vogue in the United States begins and ends with the determination of the total solids, the solids fat and the solids not fat. Yet the amount of solids in milk has little if any influence upon the public health. Starved or underfed cows are now almost unknown, and, climatic conditions aside, the per centum of solids found in milk varies almost entirely according to the breed of the cow and the time that has elapsed since she was last fresh.

In the preparation of food for infants milk is generally used simply as a base, to which are added sugar and cream together with, in the case of young infants, copious additions of water. The proportion of these various ingredients is in each case a matter of experimentation, and it matters not whether the milk portion of the ration contains 11.5 per cent. or 14.5 per cent. of solids. For every infant that is sacrificed by a deficiency of solids in milk probably fifty are sacrificed because of a lack of perfect cleanliness of the bottles and other appliances made use of in feeding them.

The amount of solids in milk is principally a commercial matter, and is a subject for little concern to health officers; but the feeding, the health and the care of a cow, and also the care of the milk from the time it leaves the udder until it enters the human stomach, are all of the utmost importance to the health of the public.

Great Britain and Paris, and we believe the rest of Europe, with their wise, beneficent, and efficient milk control, recognizing the injustice and impracticability of "legal limits," will not tolerate them.

That eminent authority upon milk analysis, Dr. Vieth, in the *The Analyst* for 1st Mo., 1886, says: "The difficulty of fixing standards for natural products is universally admitted. Nature does not allow herself to be confined in narrow bounds, but delights in pleasant variations. More than with a great many other natural products is this the case with milk, and I do not think it is saying too much, that a real 'standard' for any given sample of milk can only be furnished by a corresponding sample of the same milk taken before any interference has been possible."

Dr. James Bell, chief analyst at the Government Somerset House Laboratory, London, in the opening speech at the conference on food adulterations, held 1884, stated that "Parliament deliberately abstained from fixing limits of quality for natural products, whether in a raw or prepared state."

Dr. Bell further stated, "Whisky, gin, rum, and brandy are the only articles which are required to be sold at not less than a specific strength, unless otherwise declared at the time of sale," and then adds, "These spirituous liquors are in a different position to natural products, for being in all cases mixtures of manufactured spirit and water, the relative proportions are readily ascertainable." And further, in his work on *Analysis and Adulteration of Foods*, states, "The application of a uniform standard, which would operate alike fairly to consumer and vendor, to a natural product like milk, having a wide range of quality, is a problem of which a satisfactory solution may be almost regarded as impossible."

Dr. Bell also states, "It is frequently urged that certain limits, founded upon the analysis of samples of average quality, should be laid down and legalized for natural products, below which such products should be deemed to be not 'of the nature, substance, or quality of the article demanded;' but the adoption of such 'limits' might lead to grave difficulties. It is the opinion of practical men that it would be unwise to adopt any legislative measure with respect to limits of quality which would tend to discourage production and diminish the supply of any article of food. It would manifestly be an economic blunder, if, for instance, in order to raise the quality of milk by one-half of one per cent. on the non-fatty solids, the actual production were to be diminished by ten per cent. in quantity."

The Doctor has shown his foresight in these remarks, for under the high "legal limits" that have been enacted in parts of this country, there is no safety in marketing the product of native cows nor that of any breeds not remarkable for richness." The Society of Public Analysts, of England, have come to an agreement among themselves that milk should not be passed as genuine when the total solids fall below 11.5 per cent., of which not less than three per cent. should be fat. This carries with it in prosecutions whatever weight the court may esteem proper, but it does not, as with the "legal limits" of this country, prejudge the case.

Professor Barrister furnished a paper at the "Food Conference," above alluded to, in which he says, "In considering this act (the English Milk Act) you must bear in mind what was the distinct intention of the legislature," and this intention is still expressed by the Select Committee of 1874, which says: "Too high and rigid a standard has been fixed by some analysts, and no sufficient allowance has been made for some natural variations in milk; ten per cent. of milk solids may be more difficult to obtain under some conditions than twelve or fourteen per cent. under more favorable conditions. Allowance should, therefore, be made for these actual variations, which some purely scientific chemists seem to have overlooked." If it be a hardship that some *analysts* in England have set too high a limit, what of legislatures that give these unwarranted high limits the crushing weight of legal enactment?

That learned and practical scientist, the late Professor George H. Cook, who for so many years was the head of the New Jersey Experiment Station, wrote under date 3d Mo. 30, 1887, "The State law requiring twelve per cent. (total solids in milk) is not too high for general interest, but it should be so amended as to protect innocent parties from being charged with criminality on account of failure to which all are liable." The New Jersey law has since been amended with this object in view.

Averages and *limits* are ofttimes confounded, but the difference between them should be fully realized. If a legal or conventional limit for solids be set at the point of average, about half of the herds will, of necessity, fall below said limit, or, more correctly, the milk of nearly every herd will occasionally go below the limit, for herds take turns in supplying low results. Therefore limits, if fixed at all, should be placed at the lowest, not at the average point.

Dr. E. H. Jenkins, chemist at the Connecticut Agricultural Experiment Station, in his report for 1882, says: "It is a matter of great importance to know not simply what is the *average* composition of 'herd milk,' but what composition it *may have;* what are the limits within which pure 'herd milk' comes; and whether it is practicable to establish by law, or by regulation among dealers in milk, a standard of composition which shall distinguish pure milk from that which is watered or skimmed." And again, same report: "If we will establish a minimum limit for the percentage of solids and fat, which shall in no case condemn pure milk in any locality, we shall have to make it absurdly low," etc., thus recognizing the impropriety of establishing limits for solids, and at the same time bringing to view another serious objection to the establishment of legal limits, viz., the difficulty of prosecuting for the addition of water to milk so long as the altered milk continues above the legal limit. Excepting in cases of gross adulteration, the presence of water in milk is more surely indicated by the disturbance of the *relative proportions* of the solids fat, solids not fat, and the total solids than by the amount of either taken separately.

If cases were tried upon their individual merit without these hampering limits, experts could, as in other trials at law, give jurors the benefit of their knowledge and the results of their investigation, with their opinions as to the presence or absence of adulteration in each case. Under the system of legal limits, experts for the prosecution in their efforts to harmonize the law with common sense ofttimes certify what they do not know.

The legislatures above referred to having rendered parties penally liable for accidents affecting the quality of milk, and for careless, willful, or malicious acts of others, and to this wrong having added a requirement that a certain per centum of solids should be found in milk, notwithstanding its natural variations, it would at least have been expected that in the fixing of a limit for solids they would not have made it so high as to inflict punishment for the sale of pure, normal and wholesome milk; but this they have also done; thus adding injury to injury.

As before stated, analysts have for their own guidance in Great Britain adopted 11.5 per cent. as a suitable limit for solids in milk. The same standard has been set by the analysts of Paris, while at Amsterdam a standard of 11 per cent. has been adopted.

Twelve per cent. being the lowest "legal limit" established in the United States, I have compiled and herewith present the results of a large number of analyses, many of milk of certified purity, which conclusively demonstrate that nearly all herds produce milk that at times falls below said limit.

James Bell, in his "Analysis and Adulteration of Foods," pages 20-26, English Government Laboratory; 235 analyses of milk of known purity of individual cows, of which 52 were below 12 per cent., the lowest analysis being 10.31 per cent.; highest, 17.2 per cent. Average	12.88
Same authority, 24 samples herd milk of known purity, of which three were below 12 per cent.; the lowest analysis being 11.77 per cent.; highest, 14.69 per cent. Average	13.22
*Dr. Vieth results Aylesbury Dairy Co. Laboratory, 1881, average	12.80

*Dr. Vieth has stated, "The March and April *average* was only 12.7 and 12.8, and sometimes it came down to 12."

1882, 12,430 samples, 9120 cows, average . . 13.03
1883, 15,005 " average 12.97
1884, 14,235 " " 12.96
1885, 16,037 " " 13,06
1886, 17,269 " " 12.92
1887, 17,269 " " 12.92
1888, 18,611 " " 12.94
1889, 18 354 " " 12.94
1890, 20,624 " " 12.83
1891, 19,849 " " 12.76
1892, 23,865 " " 12.71

(Dr. Vieth's work continued by Droop Richmond, chemist.)

Dr. Vieth states, in *The Analyst* for 5 mo. '92, that the average solids, not fat, for the eleven years,—1881-1891, embracing 120,450 samples, was 8.8

Muller & Eisenstruch, Royal Agricultural Society, Sweden, daily analyses of milk, of known purity, of herd of fifteen cows, uniformly well fed, for one year; 4 times below 12 per cent. Average, ... 12.80

Dr. Hoffman, a herd of 104 cows not especially fed. Test for the entire year: 1st mo. 1st, till 5th mo. 25th, mornings' milk 11.8 per cent.; evenings' milk, 11.1 per cent.; 5th mo. 25th to 10th mo. 29th, mornings' milk 12 per cent.; 10th mo. 29th to 12th mo. 31st, mornings' milk 12 per cent.; evenings' milk 12.14 per cent. Average, ... 11.95

About 50,000 analyses made in the laboratory of the Danish Dairy Supply Co. The solids, not fat, were found to be about 8.70 per cent. to 8.80 per cent.

Denmark Experiment station, Copenhagen, report for 1891, '92, 240 cows lent by public spirited dairymen to test the relative value of various foods,—Experimental period, average solids not fat, 8.67; average total solids, ... 11.86

Post experimental period, average solids fat, 8.79; average total solids, ... 12.16

Massachusetts Agricultural Experiment Station, report for 1884, '85, '86, '87: 174 analyses of the separate milk, of known purity, from 11 cows, 11 fell below 12 per cent.

E. H. Jenkins.—Connecticut Agricultural Experiment Station, report of 1882: 208 analyses of herd milk from 127 herds largely grade Jersey, made in the 5th, 7th, 8th, and 10th months; 58 fell below 12 per cent. of which number the analyst believes the majority were pure. Average 12.40

New Jersey Agricultural Experiment Station, report for 1883, analyses of milk of known purity from 12 herds, taken MONTHLY throughout the year, highest analyses 15.47 per cent., lowest, 11.67 per cent., 6 of the 12 herds fell below the State "legal limit" of 12 per cent. during the year. One of the remaining 6 was a registered Jersey and Guernsey herd. Average . . 12.99

New Jersey Experiment Station, report for 1890, 42 analyses of milk of Ayrshire, Holstein-Frisian, and Short-Horn herds, for 8th month, 1890. 21 times fell below 12 per cent. total solids. Average 12.11

Same herds as above in 27 analyses made in 12th month, 1890, fell below 9 per cent. in solids, not fat, 18 times. Average total solids 12 55

H. B. Abbott.—Eight New Jersey herds, *weekly* analyses for eleven months, certificates of purity given. Seven herds upon one or more occasions fell below the State's "legal limit" of 12 per cent. Average 12.98

Pennsylvania State Board of Agriculture, report for 1885, p. 127.—Herd milk, Frisian cattle, various dates, total solids, 15.07, 15.98, 11.33, 11 59, 11.93, 11.64.

Again, p. 139.—Herd of 9 Devon cows, property of Dr. Cheston Morris, various dates, 12.46, 11.72, 13.3.

Marshall & Cochran, milk analysts, had under supervision throughout the year 1892 the milk of 250 herds supplying milk to Philadelphia, with results as follows:—Total number of analyses, 10,927; number below 12.5 per cent. of total solids, 3,352; below 12 per cent., 1,041: below 9 per cent. of solids, not fat, 9,150; below 8.5 per cent. of solids, not fat, 2,328. Of the 250 herds the milk of 245 did not at all times keep up to 12.5 per cent, and that of 210 herds did not keep up to 12 per cent. total solids. Samples were taken upon the arrival of the milk at station in the city.

The above showings do not at all represent the total number of times that a producer or vender of such milk would become amenable to the law because of its falling below twelve per cent. Only two of the reports are of *daily* analysis for an entire year, the remainder are weekly, monthly, or at intervals. It is evident that, had the other analyses been made daily, there would have been a large increase in the number of results below twelve per cent. Though the milk offered for sale by a producer or dealer should much exceed the limit for 364 days in the year, yet a fall below the limit for the remaining one day may be visited by fine or imprisonment, blasting an honest reputation, that has been of lifetime growth.

It is *important* that a limit adopted by chemists, and *imperative* that a "legal limit" shall not condemn honest, wholesome milk; because these limits are adopted in lieu of evidence of adulteration, presumably because the usual methods for the detection of criminalities are too laborious and too expensive to be bestowed upon dealers in milk.

This attempt to force an increased amount of solids in milk is a sanitary blunder. As before stated, "Under feeding" is now almost unknown; "intensive feeding" being the order of the day. The milk of a cow reasonably fed is evidently

more wholesome than that of one thrown into a feverish and congested condition by large rations of highly concentrated foods. Likewise the milk of the first five months of the cow's milking period, though low in solids, is a more wholesome food than that of the remainder of the milking term. Yet these mistaken sanitarians condemn the milk of the earlier period as adulterated, and accept that of the latter because higher in solids.

Dr. Bell says, "For a long time it was contended that cows which gave milk that contained less than 11.5 per cent. solids were either diseased or starved, but this notion may now be said to be dispelled, for the more the matter has been investigated, the more has such a position been found untenable."

Neither is it possible to materially alter the solids in milk by high feeding, as has been demonstrated by a most thorough and exhaustive experimentation conducted during the past five years in Denmark, as previously referred to. There were under test 1152 cows, divided into 112 lots, on nine farms in different parts of the country. The Danish report states, "These changes (in ration) have practically not at all been traceable in the chemical composition of the milk." Again, "The lesson taught by them is that sufficient nutriment being provided for a cow in all cases, the food will affect the quantity of the milk alone, and not its quality."

The remaining objectionable feature, above recited, as embraced in some of our American legislation, is the prohibition of the sale of skim milk. This result has been brought about by selfishly interested parties, who for the accomplishment of their purpose have decried this valuable article of diet. That in skim milk is found an economical, wholesome, and bone and sinew making food has nevertheless long been recognized by the farming class, generation after generation having thriven and grown strong upon it. Food scientists also have of latter years demonstrated that cost, digestibility and nutrition considered, skim milk is without a peer in the list of animal foods. Trade considerations also demand a free and unrestricted opportunity for the sale of skim milk. The demand for cream is a reasonable and legitimate one, and the dealer must and will meet it. Now, how is the dealer to procure cream where the sale of skim milk is prohibited or so restricted that partial or entire prohibition ensues? The procuring of cream from the country is expensive, difficult and often unsatisfactory. Without doubt the tendency of the law is to urge the dealer to a robbing of the cream from the milk sold as whole milk.

The demand for cheap milk is positive and general. It is a demand that cannot and should not be put aside. A large part of our population must have cheap milk for general family use, or be restricted to little more than sufficient for the infantile portion. Again: the same family will at one time buy cream and at another prefer to purchase skim milk, as the requirements of the table vary from day to day; but these laws interfere with the right of the purchasing public thus to exercise a prudent and praiseworthy economy, by obliging parties to purchase large quantities of whole milk in order to secure cream, when only cream is wanted; and by forbidding the opportunity to purchase the cheaper skim milk when such milk meets their wants. Skim milk can be supplied at half the price of whole milk, and if this were regularly and systematically done, and the public properly acquainted with its value as food, it is probable that the demand for the milk product of the dairies of our country would increase two-fold. In meeting the undeniable demand for cheap milk, laws prohibiting and restricting the sale of skim milk enter in as a most unfortunate, meddlesome, and disturbing factor; for while they encourage the dishonest dealer to rob the whole milk of a portion of its cream, whereby *he* is supplied with a cheapened article, they prevent the *honest dealer* from supplying himself with cheaper milk, which he could do by skimming, and would then gladly sell the skimmed milk as such at a reduced rate. Thus the unprincipled dealer is enabled to monopolize that portion of the public custom that demands cheap milk, and is placed in position to drive the honest dealer out of the market, from lack of a general patronage and support.

Advocates of these laws contend that if skim milk is altogether prohibited, the

admixture of it with whole milk is thereby prevented, whereby a source of adulteration or reduction is avoided. What force can there be in this argument; for whole milk is readily convertible into skim milk, and whoever possesses whole milk is able to supply himself with skim milk *ad libitum*, and, as has been shown, the law itself urges upon him the temptation to skim the whole milk in the effort to obtain cream.

Before such legislation as has been above discussed be extended to other cities and states, it would be well to investigate its effectiveness where now enacted. It will be found that these laws are retained upon the statute books only so long as they are not enforced; that they will not bear the light of investigation nor to be tested by science or justice; that they belong to the night and not to the day, to the Middle Ages and not to the Nineteenth Century.

As an instance of the folly of such legislation, an expert in milk analysis recently purchased milk promiscuously of thirty retail milk dealers in Boston; analysis revealed that twenty-two of the thirty samples fell below the Massachusetts legal limit of 13 per cent.

Again, the ridiculous Pennsylvania Milk Act of 1885, is, we believe, practically without enforcement anywhere in the State, and were enforcement attempted its prompt repeal would be insured.

If health officers would confine themselves to their legitimate calling and not attempt to regulate commercial frauds, their work would be much simplified.

He who wittingly jeopardizes the health of the public, is a fit subject for criminal procedure and condign punishment, and it is proper that the health officers should be diligent in bringing such to justice; but parties guilty of a commercial fraud only can be more effectually reached by other methods. A valuable illustration of enlightened food control is to be met with in Paris, where each police station receives samples of food, etc.; these samples are analyzed at the Municipal Laboratory gratis, and certificates of analysis given the furnishers of samples. M. Girard, the *Chef du Laboratoire*, states: "Thus enlightened by certificates of analysis they (the buyers) can change the furnisher, and seek elsewhere such food and drink as would be worth the price they are willing to give, and that will repay the trouble of their search. This abandonment of the adulterating vender by his cheated client constitutes for the former a pecuniary punishment not less severe than the fines inflicted in courts."

Professor Stephen P. Sharpless, State Assayer of Massachusetts, is quoted in bulletin No. 25, p. 37 of the U. S. Department of Agriculture, (division of Chemistry) thus: "A law upon this subject (the adulteration of foods) must be simple, easily understood, and general in its application, and it should not attempt to control all commercial frauds but only such as are detrimental to health."

If health officers would direct the attention of the public more to the necessity of absolute cleanliness in all that pertains to or comes in contact with milk, instead of devoting almost all their energies to attempts to increase the amount of solids therein, they would far better serve the interests of health and sanitation, and would throw a real safeguard around infantile life.

Pemberton Dudley, M. D., member of the Penna. State Board of Health, writes as follows in regard to the relation between the milk supply and infant mortality: "It is very easy for a physician, speaking from the history of a few cases in his own practice, or perhaps from some medical tradition, or 'old wives' fables,' to attribute the disease (cholera infantum) to impure air, unripe fruits, unwholesome milk, etc., but to prove that any considerable number of cases arise chiefly from these causes, is quite another matter." And again: "If it be absolutely necessary to place the sale of milk under additional restrictions, let it be so; but we cannot justly urge, as a reason for such restriction, the high mortality-rate among infants, unless we first demonstrate, far more conclusively than it has yet been done, that milk, pure or impure, is to any great extent the cause of such mortality."

Dr. Leffmann, Hygienist and Food Inspector to the State Board of Agriculture of Pennsylvania, and otherwise so largely experienced in this line of inves-

tigation, still fully endorses the following as by him given to one of our local dailies in the year 1890: The recent heavy mortality among young children being referred to, together with the prevalent public sentiment that cholera infantum is largely caused by low grade milk, the doctor said that he thought there was very little genuine cholera infantum about, and that the disease called by that name is really an intestinal irritation which, when it is due to milk at all, is caused by a decomposition of the milk after it leaves the farm, and not to any adulteration. "I do not believe," he said, "that those who claim that cholera infantum is due to milk adulteration really mean what they say. There is not a particle of a doubt that milk does often cause intestinal disorders in young children. When milk begins to decompose there is a poison formed called tyrotoxicon. This may be formed within a few hours after the fluid leaves the cow, and is by no means the result of any adulteration on the part of the farmer or dairyman."

In this connection may be quoted the very sensible remarks of Dr. Townsend, Health Officer of the District of Columbia, as given in Bulletin No. 32, p. 64, of the U. S. Department of Agriculture above named: "Although the white population is estimated as being twice that of the colored, yet it will be seen that the deaths of the colored infants exceed the white by 200. This material difference in the death rate may be charged, to a great extent, to the location of the colored people in alleys and unhealthy parts of the city, and their unsanitary surroundings; while there is no doubt that a very large proportion of these children die in consequence of being fed improper and unhealthy food, especially cheap and badly prepared condensed milk, and cow's milk which has been allowed to stand to the point of acidity, after having been kept in vessels badly or unskillfully cleaned. It is a well-known fact that infant mortality in the country is much less than that in the cities. This difference cannot wholly be attributed to the unsanitary conditions of the city. Much of it can be laid to the unnatural custom of urban mothers in depriving their offspring of the food nature has prepared. It is now a well established fact that no artificial food has as yet been manufactured which will convey the same amount of nutriment to the child, without causing functional derangement, as mother's milk."

Victor C. Vaughan, Ph. D., M. D., Professor of Hygiene and Physiological Chemistry in the University of Michigan, in his work on "The Chemical Factors in the Causation of Disease," (p. 136), says: "There are many germs, any one of which, when introduced in the intestines of the infant, under certain favorable conditions, may produce diarrhœa." Further, (page 139), he says: "That tyrotoxicon is one of the causes of the violent choleraic diarrhœa of children there can scarcely be a doubt." And again, (p. 137): "The chief reason why the breast-fed child has a better chance for life than the one fed upon cow's milk lies in the fact that the former gets its milk germ free."

All breeds of cows may be safely trusted to perform their part well in the production of wholesome milk. Let us see that diseased individuals are eliminated from herds, that the drinking water is pure, that a sufficient and not excessive supply of normal food is fed, that stables are abundantly supplied with air and light, that persons suffering from contagious diseases take no part in the handling of the milk, and above all that the most scrupulous cleanliness be rigidly observed at every stage from the cow's udder to the human stomach, and the commercial aspect of the question may, after being illuminated by the light of scientific investigation, be safely left to the buyer and the seller.

GEORGE ABBOTT.

Annotations.

WE are pleased to note that the Franklin Square Sanitarium has come into the pale of ethical medical institutions. The very objectionable advertising to the public has been stopped; and the character of the medical gentlemen who have now associated themselves with the work is such as to warrant its success. The sanitarium treats all forms of narcotic habit.

SALPINGITIS

A VALUABLE contribution has been recently published by Dr. Landau, of Berlin, translated into the French by Pozzi (Archives de Tocologie et de Gynècologie, Mars, 1893, p. 216), with the above title.

Space will not permit here to give it in full, hence nothing more than an epitome can be given. In speaking of the pathology of salpingitis, he says that it has a morbid anatomy peculiar to itself; that it is the only tubular structure in the human body liable to frequent suppurative occlusion. Modern science, he reminds us, has enabled us to diagnose this condition with almost a certainty in every case. It is nearly always unilateral, while hydrosalpynx is bilateral.

He speaks of its frequency after abortion and gonorrhœa, and places inspection, percussion, and puncture in the first rank as diagnostic resources. Clinically, he says it has no unique type. It may be divided into two forms, the acute and chronic.

Acute Salpingitis —This may spontaneously cease of itself. As a rule we should interdict surgical measures in this variety, unless in special emergencies. The physician, he adds, is competent to deal with it by rest, local and general measures.

For violent, colicky pains, the narcotics serve an invaluable purpose. Opium in suppositories, above all, is highly commended. Opium, he alleges, is infinitely superior to morphine in diseases of the lower abdomen, for calming properties, control over vomiting and peristalsis. We may apply cataplasms over the abdomen, cold or warm, according to the individual preference of the patient.

When the pain is chiefly local and very severe, free leeching is highly recommended. But in cases of blenorrhagic salpingitis, after the acute symptoms have subsided, it may now become a question as to extirpation of the diseased tube. He advises strongly as a rule against surgical intervention in the acute stages, and cites several fatal results after interference in the presence of high fever.

In the quiescent stages, when the pus has lost its virulence and the walls have contracted moderate adhesions, is the time for surgical relief, though he admits not a few of these cases will undergo a cure by absorption, or spontaneous drainage through the vaginal outlet.

Chronic Salpingitis.—In the treatment of this we must carefully note objective conditions and subjective symptoms. We must note the individuality of our patient. He says that too frequent operations are much more to be condemned than the abuse of internal medication. We are now in a transitional epoch, when less frequent resort is had to the bistoury. All radical operations are not radical in their results. Inflammation often has reached the peritoneum, so that when we remove the tube many foci of this process yet remain. Without speaking of the dangers which always attend a laparotomy, with the new disorders which it may provoke, we may mention hernia, floating kidney, etc.

Pelvic neuralgias and many troublesome hysterical phenomena have been known to follow an abdominal section. Indeed, he cites a startling array of very serious functional and organic disturbances which he has seen follow operations on the uterine appendages, and castration or spaying. Venereal desire is generally lost and cöitus is borne with repugnance. The health of many of our patients, they will tell us, was good before operation, but after it their misery was quite insufferable ; and for these neural perturbations there is no known cure. He says that he regrets to find himself on this question of spaying in direct opposition to many surgeons ; but the painful and numerous examples of invalidism which he has witnessed, compel him in conscience to speak out. We must not condemn the ablation of the tubes, for it is an excellent and valuable operation; but its performance is seldom called for.

For chronic salpingitis, he recomends orthopædic treatment, massage, catheterism, lavage, curettage and electricity, which measures in his hands have never failed to relieve and cure even the most aggravated cases. He describes in detail and with commendable clearness the technique of his treatment, which should be patiently and diligently tried, before sanguinous measures are advised.

NOTE BY THE TRANSLATOR.

That a pus-tube always demands an abdominal section, is an assumption as preposterous as it is dangerous. This I have had an opportunity to demonstrate recently to my full satisfaction, in a case which I was called to see by Dr. G. W. Gaudineer of this city. Patient a private *demi-mondaine*, after an abortion which she had induced, developed a fullness on the left side, with high fever, a ballooned abdomen and intestinal obstruction. Bowels had not opened for six days.

Placed under full anesthesia of chloroform. Large pus-tube mapped out readily when the muscles were relaxed. Within an hour after regaining consciousness had a large evacuation. Mercurial inunction over entire abdomen recommended; hot and repeated poulticing was practiced, with enough morphine to relieve pain. For the next week had a copious sero-purulent discharge from vagina.

In two weeks pyo-salpinx had wholly vanished and patient has quite recovered her usual health. T. H. M.

WOMAN'S MARVELLOUS TOLERANCE TO SURGICAL OPERATIONS.

IN a general way, it is a well recognized fact that women bear surgical operations of any description, as a rule, better than men; the only exception, if any, is kelotomy for strangulated hernia.

Hence many surgeons will oftentimes advise and undertake operations on the female, which they would not hazard in men. This is important to bear in mind as a clinical point, which, if observed, may lead to the saving of many lives, which otherwise would be sacrificed by a needless timidity.

The following is a case to the point from Prof. Roux of Lausanne.[1]

Mlle. B. aged forty-seven, entered the hospital with prolapsus of the uterus January 13th, 1888. For twenty years she had oppressive feelings in the lower pelvis, with pain in the back.

In 1884 was attacked by a furious bull in a field, and thrown twice to the ground, thereby having had several ribs fractured and a hernia produced. Soon after this, hernia of the uterus through the vagina. Uterus remains outside the vulva, equally in bed as well as on her feet.

First operation January 17th. Anterior colporraphy plastic perineal of the "Emmet-Lawson Tait Sanger" method. Union by first intention.

February 3d, Alexander's operation.

April 4th. Uterus yet making its way downward and threatening to again prolapse, the vagina was denuded of its mucous membrane, as high up as possible.

Yet a tendency to relapse May 12th, when the labia were freely stripped of of their mucous membrane and sealed with sutures.

December 26th. Patient returned to hospital, this time, because she had a large prolapse of the anus, and the propped uterus pressed with great force against the rectum.

The anus was now deeply cauterized. As patient recovered from this, she commenced to suffer from a severe pain over the left lumbar region, where there was a large, painful movable mass, which was diagnosed as a malignant disease of the kidney. March 9th, 1889, a nephrectomy was performed, by which the diseased organ was removed. The wound healed by primary union, and the patient made a good recovery.

Now, again, the uterus commenced to give further trouble. By pressure on the rectum and bladder, it would interfere seriously with their function, causing dysuria and more voluminous prolapse than ever.

At this time, both the operator and patient commenced to despair. The unfortunate woman now steeled herself for another capital operation, and on the 9th of May the uterus was amputated.

She quitted the hospital in good condition on June 12th.

But her reprieve was short, as she returned again in September with large nodosities occupying both inguinal regions.

Diagnosis: Recurrent metastatic cancer of uterine appendages.

December 10th. Laparotomy. Found a mass of silk ligature in the stump

[1] Revue de Medicine, De La Suisse Romande, 20 Mars, 1893.

of the cervix, with cancer in both ovaries and tubes. Result of operation very good, left the hospital Jan. 1st, 1890.

September 4th, 1890, returned to the hospital with a neoplastic formation in the cicatrix of the wound.

It was decided not to operate now, and she went home; but returned again, January 16th, 1893, with threatened rectal obstruction. Now Bryant's operation of lumbar colotomy was performed with the greatest relief. Left the hospital for home greatly improved in health.

This is as far as the case has been traced.

It is one of those examples which so clearly illustrate what modern surgery has done and is doing for that class of cases, formerly doomed as hopeless, but which now, by aids within our reach, may be made comfortable, life lengthened, and in not a few instances a practical cure is effected. T. H. M.

ELECTRICITY.—Although it has long since passed the period of fashionable novelty, electricity grows steadily in favor as a therapeutic agent. The great remedial powers of the various currents are being studied by many physicians and applied with a precision impossible in the misty, half-knowledge of adozen years ago. Dr. Massey has contributed a paper to the Philadelphia County Medical Society this week, giving a summary of the work done in his private hospital. This, with other papers pertaining to neurology will shortly appear in one of our special editions. Dr. W. H. Walling has been making numerous applications of the currents to special parts, and urges strongly the importance of thus concentrating the action and confining it to the point where it is needed.

Book Notices.

METHODS OF PRECISION IN THE INVESTIGATION OF DISORDERS OF DIGESTION. Read before the Cincinnati meeting of the Missisippi Valley Medical Association, Oct. 13, 1892. By J. H. Kellogg, M. D. Modern Medicine Publishing Co., Battle Creek, Mich., 1893.

A plea for the application of exact chemical analytic methods in the diagnosis of gastric disorders.

DIET FOR THE SICK. By Miss E. Hibbard, Principal of Nurses Training School, Grace Hospital, Detroit, and Mrs. Emma Drant, Matron of Michigan College of Medicine Hospital, Detroit; to which has been added Complete Diet Tables for various diseases and conditions as given by the highest authorities. Detroit, Mich., The Illustrated Medical Journal Co., Publishers. Paper, 74 pages. Price, postpaid, 25 cents; 6 for $1.00.

HISTORY OF THE LIFE OF D. HAYES AGNEW, M.D., LL.D. By J. HOWE ADAMS, M D. With fourteen full-page portraits and other illustrations. In one large royal octavo volume, 376 pages, extra cloth, beveled edges, $2.50 net; half-morocco, gilt top, $3.50 net. Sold only by subscription. Philadelphia: The F. A. Davis Co., publishers, 1914 and 1916 Cherry Street.

This is a work that will find a cherished place in many a library; that will be treasured by many a friend to whom that great, warm-hearted man was dear. The story of his life is one that ought to be read by every young physician; a blameless life; where every step on the upward climb was won by honest work; never by the charlatan's tricks, or the reporter's puffing.

This is not a book for review: it is one that every reader of this journal can read and ponder over; and rise up a better man for it.

A TREATISE ON THE THEORY AND PRACTICE OF MEDICINE. By American Teachers. Edited by William Pepper, M. D., LL. D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. Vol. I. For sale by subscription only. Price per volume, cloth, $5; Sheep, $6; half Russia, $7. W. B. Saunders, Publisher, 913 Walnut Street, Philadelphia, Pa.

The first volume of this valuable work is now in the hands of the profession. The cyclopedic method gives the best obtainable results in the construction of such books, and the present volume shows this admirably. One advantage thereby obtained is that the most eminent teachers can be induced to write single articles, who yet could not take the time to prepare complete treatises. Throughout the work, those parts treating of pathology are especially commendable; while the therapeutics is conservative uniformly. We recommend the work to our older readers especially, as being rather suited to the experienced practitioner than to the student.

The Medical Digest.

LACTATE OF STRONTIUM.—While the the salicylates answer all purposes in acute rheumatic fever, they are of little value in the non-febrile forms. Two such cases have been under my care during the past winter. As long as they took sodium salicylates in full doses, the symptoms were reduced to a minimum, but immediately returned on the discontinuance of the drug, which, moreover, had a deleterious effect on the health. I then directed these patients to take the solution of strontium iodide (Paraf-Javal,) beginning with four drachms daily. Improvement followed, and the dose was gradually reduced to one-half. The effect was very good; the symptoms gradually subsiding, while the general health improved. Both patients resided in damp houses; and the rheumatism showed a tendency to recurrence, though at intervals much longer than when under the salicylates.—*Waugh.*

The *Wiener Medicinische Presse*, No. 14, contains the following report:—

"Balneologen-Congress.—At the XV public meeting of the Berlin Balneological Society, held March 10th to 14th, 1893, Professor Leyden stated that Jasper's diabetes-pills did not have any influence on the course of the disease. He had made trials with Levulose (Diabetine-Schering), a certain kind of sugar, and found that this product was made use of to more advantage in the human economy than cane-sugar and other carbo-hydrates, and that the advantageous use was increased with the length of time the article was taken, while for cane-sugar the opposite condition obtains. This result is quite satisfactory, as it proves the feasibility of improving the nutrition of patients with diabetes of medium intensity."

SALOPHEN.—When the preparations of salicylic acid were first known in medical practice, it was thought a specific had been discovered for the treatment of rheumatism. As time passed it was found that the salicylates failed to meet all the requirements of an anti-rheumatic; they frequently caused disturbance of the stomach, nervous disorders, irritation of the kidneys and weakness of the heart. Accordingly, when salol, the phenol-ether of salicylic acid, was brought forward by Sahli as a substitute devoid of these disagreeable effects, it met with ready acceptance by the profession; but it was soon found that owing to the quantity of carbolic acid in its composition salol gave rise to carbolic acid poisoning in some cases, if employed in larger doses. To obviate these toxic effects, a new body was constructed, in which the phenol element of salol is replaced by an innocuous substance, and to this resulting compound the name salophen has been applied.

Although only recently introduced, salophen has already demonstrated its value as an anti-rheumatic in many hands. Dr. W. H. Flint (*N. Y. Med. Jour.*, July 30, 1892) has employed the remedy in six cases of acute articular rheumatism, and concludes that we possess in salophen a remedy equally as the other salicylates to control the symptoms of acute rheumatic arthritis, but devoid of their tendency to weaken the heart's action, to disturb the stomach, and to produce albuminuria and smoky urine. Prof. Hobart A. Hare, of Philadelphia (*Therapeutic Gazette*, Jan. 1893,) speaks very favorably of the action of salophen, in cases of severe neuralgia and myalgia of rheumatic origin, and considers the drug an important addition to the materia medica. Prof. Guttmann, of Berlin (*Berlin Klin. Woch.*) has employed it in cases of acute articular rheumatism and found that it exerted very beneficial effects, especially in recent cases; the pains and swelling of the joint being rapidly relieved. Dr. Frolich (*Wien. Med. Wochenschr.*, July, 1892) states that the remedy did not fail in one out of thirty cases of acute rheumatism, and prefers salophen to the salicylates because (1) being decomposed in the intestine it does not irritate the stomach; (2) it can be given in large doses and for a long period without unpleasant effects; (3) it is tasteless. Dr. Edmund Koch ("Inaugural Dissertation") has recently reported a large number of cases of acute rheumatism treated with salophen, and comments upon the rapidity with which it removed the pains, fever and swelling. In various nervous affections, headache, migraine, sciatica, it proved very effi-

cient, rapidly removing or at least relieving the pains, and this without disagreeable after-effect. These remarkable analgesic properties of salophen are also confirmed by Dr. Caminer (*Therap. Monatshefte*, Oct. 1892) who obtained excellent results from its use in cephalalgia, hemicrania, trigeminal neuralgia and sciatica.

Effects of Trional and Tetronal on the Insane.—These new remedies both have a marked hypnotic and sedative action, but trional appears to be the more serviceable as a hypnotic for the insane. On the other hand, small doses of tetronal appear to give the best results as a sedative. As a rule, the hypnosis which is produced is calm and quieting and resembles very closely natural sleep. In a few instances unpleasant after effects were noted, but they did not continue long and were not at any time alarming. They do not depress the heart's action.

In the majority of cases fifteeen grains (gramme 1) of trional given in hot milk at bedtime will produce sleep of from six to nine hours' duration, which is not accompanied by dreams. The time it takes to produce this effect, is, in favorable cases, from fifteen to forty-five minutes, although it may be prolonged to over two hours. With tetronal it was found that generally fifteen grains (gramme 1) were required to obtain the same results, and as this remedy is twice as expensive as trional the latter is to be preferred, as a rule. Both of these drugs have the effect with some patients of producing sleep for two nights after a single administration.

Their sedative action appeared to be most satisfactory, and with few exceptions did not produce a drowsy or stupid condition. The dose of trional as a hypnotic is from ten to thirty grains (grammes .66 to 2.) but it is advisable to begin with fifteen grains (gramme 1). As a sedative ten or fifteen grains (gramme .66 or 1.) at least are required, but in some patients even forty-five grains (grammes 3) will not produce any effect. The dose of tetronal as a hypnotic is from five to thirty grains (grammes .33 to 2.) but in the majority of patients fifteen grains (gramme 1) will be required to procure a satisfactory sleep. As a sedative five or ten grains (gramme .33 or 66) given once or twice a day will generally prove to be of benefit.—*Mabon, Am. Jour. of Insanity.*

For bronchial catarrh cocillana has recently been warmly recommended. In eight cases of acute bronchitis I gave this drug a trial. In six the effect was beneficial; better, it seemed to me, than ipecacuanha, with which cocillana has been compared. In two cases it failed. Both these were fat and plethoric, over fifty years of age and very liable to such catarrhs. Ammonium chloride and bromide, with Dover's powder, proved here more effective than the cocillana. My conclusion was that the latter is one of our best remedies in acute and chronic bronchial catarrhs.—*Waugh.*

For Cough:—

℞. Tinct. lobeliæ
Tinct. sanguinariæ canadensis..aa ʒij
Syrup. senegæ . . . . . ʒiv
Morphinæ sulphatis. . . . . gr. ss
Syrupi. . . . . ʒj
Infus. pruni virginianæ q. s. ad ʒviij
M. Sig.—Dose, a teaspoonful *pro re nata.*

Claiborne, Va., Med. Monthly.

Diabetine.—*H. von Hebra's* clinical reports, which were confirmed by many other researches and experiences, describe Diabetine as a saccharine food that can be taken freely and without injury, and most nearly approaches the ideal carbohydrate food indicated in diabetes.

Minkowski stated at the recent Congress of Internal Medicine in Leipzig, that the results of his research fully warrant the hope that the introduction of Diabetine in the diet of diabetic patients will prove of great value.

Dr. Waugh has given Diabetine to a gentleman who had recovered from diabetes under the use of lactate of strontium. No return of the diabetes has occurred, although he has employed diabetine for several months.

Alexander Duke calls attention to stretching the sphincter ani as a remedy for chloroform collapse. A child under chloroform was apparently dying, and artificial respiration and cold affusions had failed. The operator introduced the thumb into the anus and drew it forci-

bly back towards the coccyx. The child gave a loud cry, and at once began to struggle. As the sphincter is the last to succumb to anesthesia, its reflexes are the last that can be stimulated —*Med. Times.*

FOR HEADACHE OF GASTRIC ORIGIN:—

R. Salophen 3j
Div. in chart no. . . . . vj
S.—One every half hour until better.
—*Waugh.*

FOR chronic diarrhea, Hughson (*Va. Med. Mo.*) recommends salicine, gr. vj, every four hours.

News and Miscellany.

Mayor Stuart has appointed the commission to select a site for the cholera building: Dr. W. H. Ford, of the Board of Health; Dr. J.R.Clausen; Dr.E.O.Shakespeare; Dr. W. M. Welch, of Municipal Hospital, and J. T. Windrim.

Changes in the Medical Corps of the U. S. Navy for the week ending April 22, 1893.—Medical Director A. C. Gorgas from the Naval Hospital, Philadelphia, Pa., and to special duty, Philadelphia, Pa.; Medical Director D. Kindleberger from special duty, Philadelphia, Pa., and to the Naval Hospital, Philadelphia, Pa.; Assistant Surgeon A. B. Pusey ordered to the Naval Hospital, Norfolk, Va.; Assistant Surgeon Henry La Motte detached from the U. S. S. Vesuvius, and to the Naval Hospital, Norfolk, for treatment; Assistant Surgeon C. W. DeValin detached from the Naval Hospital, Norfolk, Va., and to the U. S. S. Vesuvius; Surgeon John C. Wise detached from the U. S. S. Alliance and to the Naval Hospital, Norfolk, Va., for treatment.

Dr. Henry Leffmann recently published the results of analyses of a number of malt extracts, showing that salicylic acid is present in a majority of these preparations. As this acid inhibits the action of diastase, it is obvious that its presence in the lighter, liquid extracts would be objectionable. The clinical results obtained from Hoff's extract (Tarrant) have been so good, that we requested an explanation, and received the following: This extract is imported in barrels. These are returned to Germany; and, before being refilled, are washed out with a solution of salicylic acid. Small as is the quantity remaining on the inside of the barrel, it suffices to give the reaction of salicylic acid to the delicate tests applied. That only a trace of the acid exists, is shown by the following extract from a report made by Frederick P. Power, Professor of Pharmacy and Materia Medica, University of Wisconsin:

"With regard to the salicylic acid in the malt extract, I would say that the amount is so very small that I do not think it can be considered as at all injurious to the preparation, or in any way detrimental to those who use it. The amount was indeed so small that I did not attempt its quantitative estimation. . . . I am personally quite confident that any medical authority would confirm my opinion, respecting the harmlessness of the substance, in the amount in which it is contained in the preparation." (Signed) F. B. POWER.

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The Times and Register.

Vol. XXVI. No. 18. PHILADELPHIA, MAY 6, 1893. Whole No. 765.

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Original Articles.

AMPUTATION AT HIP-JOINT.[1]

ENCYSTED CARTILAGINOUS TUMOR NEAR SUBCLAVIAN VESSELS; OPERATION ON THE FIFTH NERVE.

By JOHN B. DEAVER, M. D.

MR. PRESIDENT and Fellows of the Academy: I will first present a case of amputation at the hip-joint, done for osteomyelitis of the femur. At the time of the operation the patient was very much depressed from sepsis, consequent upon prolonged suppuration. The only point of interest in the case from an operative point of view is that during the amputation hemorrhage was controlled simply by an Esmarch tube applied round the thigh, above the trochanter and along the crease of the groin, being retained here by two pieces of bandage, one passed beneath the tube in front and the other beneath the tube behind, each of which was held by an assistant. An oval flap of skin and fascia was made and the muscles divided down to the bone by a circular sweep of the knife. The superficial and deep femoral arteries, with their accompanying veins, were next tied separately, as well as those of the muscular branches which could be recognized. The tube was next loosened a little, and the small vessels, as they bled, caught with hæmostats. The tube was now removed, and an incision carried from the external angle of the wound up over the trochanter and into the joint dividing the capsular ligament, when the muscles were carefully separated from the bone and disarticulation completed. The amount of blood lost, I do not think, amounted to more than two ounces. The advantage this procedure offers over the Wyeth method is in not dividing the femur before the disarticulation is made, and further, that the amount of blood lost is not any greater, and that the vessels not being constricted for so long a time, there is less likelihood of consecutive bleeding. The tumor I here present is one of sarcoma, removed from the side of the neck, which had its origin from the periosteum of the vertebræ. The symptoms presented by the patient were those of laryngeal obstruction, paroxysmal in character and attended by the expectoration of large quantities of mucus. The symptoms of obstruction were not caused by pressure inflicted upon the larynx or trachea, but from involvement of the laryngeal nerves. Before the operation was performed I very much questioned if the removal of the growth would suffice to relieve the obstruction which was

[1] Read before the Philadelphia Academy of Surgery, at the meeting of March 6, 1893, the President, Dr. William Hunt, in the chair.

afterward proven by the same symptoms continuing until death twenty-four hours thereafter. The dissection was not a very difficult one, as the mass lay behind the large vessels, the pulsation of which was scarcely perceptible. The great amount of infiltration around the vessels must by necessity have involved the laryngeal nerves as well.

The second specimen is one of cyst, in the wall of which is a circular piece of cartilage. It was removed from the subclavian region of a man who was injured at the battle of Appomattox, April 9, 1865. When the accident occurred he was standing under a tree. He was not able to say, definitely, whether the injury resulted from being struck by a piece of shell or by a piece of wood from the tree. The only noticeable trouble at the time of the accident was fracture of the clavicle. From that time to the present a sinus has existed in the neck which patient states has been operated on without success. He was referred to me by Dr. Hildenbrand, when, upon examination, the orifice of the sinus was plainly to be seen, immediately above the inner end of the left clavicle, from which was escaping a purulent discharge and through which, upon the introduction of a probe, could be felt, what was believed, most probably, to be dead bone. Examination with the fingers demonstrated the presence of a partly movable mass which was thought to be a detached piece of the clavicle which had undergone necrosis. Operation revealed the presence of this cyst; it was attached to the sheath of the subclavian vessels and to the pleura. Examination of the clavicle through the wound showed no trouble other than a slight enlargement at the seat of the original fracture. Examination of the cyst wall demonstrated very clearly the presence of cartilage.

T. M., aged fifty-eight years, white, Irish, slate-roofer, from a child had been very nervous, the slightest excitement or undue exertion throwing him into paroxysms of nervousness. When twenty-eight years of age, had an attack of smallpox which was followed by a weeping sore over the right inferior maxilla. This continued to discharge for six years, when it healed. Immediately after the healing of the sore he was attacked with neuralgic pains which were referred along the course of the inferior dental nerve. This pain continued at irregular intervals for six years, when he consulted a surgeon, who was supposed to have removed a section of the nerve near the dental foramen. Very little, if any relief followed this operation, when a second was performed by the same surgeon one year later; this was followed by relief for one year, when he had another attack of the pain. He now came under my care. I trephined the inferior maxilla over the angle and removed a section of the inferior dental nerve. This was followed by relief for a period of fifteen months, when the pain again returned. I now opened up the field of the old operation, exposed the proximal end (stump) of the nerve, excised a part therefrom, chiselled away the roof of the remaining portion of the dental canal, and removed the distal portion of the nerve as far as the mental foramen. This was followed by relief for sixteen months, when the pain returned, being referred, in addition to along the course of the inferior dental, along the side of the tongue. I now simply cleared out the field of the old operation, but this was not followed by any marked relief. I again operated, this time taking out a vertical section of the ramus of the jaw as far as the sigmoid cavity, and removed a further section from the proximal end of the inferior dental, and at the same time a section from the gustatory nerve. This was followed by relief. I purposely refrained from taking a section from the inferior maxillary nerve immediately after it passes through the foramen ovale, also from performing an intracranial operation, as I am not as yet, by any means, convinced that these more radical procedures are warrantable until the milder ones have been done without success. I can recall a number of cases, both of neuralgia of the inferior as well as of the superior maxillary nerve; where I have followed this course in relapsing attacks, with satisfactory results, to convince me that a longer period of relief from pain is offered the patient than would result, perhaps, by the more radical operations, removal of the Gasserian ganglion, etc., in the light of the present statistics.

DISCUSSION.

Dr. John B. Roberts: Twice I have had occasion to remove large malignant growths from the neck, and in both cases the result was the same as in Dr. Deaver's case. In one case, a child, I had to tie the internal carotid artery, and the child died on the second day with symptoms of brain implication. The other case was that of a man with a deep tumor requiring ligation, either of the internal jugular vein or of a large branch close up to the vein, I now forget which. I thought that he was going to to get well, but he died on the fourth or fifth day with symptoms, the origin of which I could not determine. The wound was aseptic and nearly healed. He was found to be breathing very rapidly, and sank in a few hours in a sort of collapse. I could not tell whether there was implication of deeper organs or heart clot. No autopsy could be obtained.

Dr. J. Ewing Mears: In the case which I reported and to which reference has been made by Dr. Deaver, I removed two and one-half inches of nerve and submitted it to Dr. De Schweinitz for examination, and the condition found was that of fatty degeneration. It is important, it seems to me, that our studies should be directed toward ascertaining, if possible, what the pathological condition is in these cases of trifacial neuralgia. I think that all of us have come to the conclusion that operative procedures appear in most cases, to be hopeless so far as permanent relief is concerned. It is impossible that from studies in regard to the cause of the condition, we may be able to indicate some method of operation which may prove more successful.

Last spring the members of the American Surgical Association were shown in the Massachusetts General Hospital the results in five or six cases of operations upon the second and third divisions of the fifth nerve for neuralgia. In these cases an incision had been made over the temporal region, the muscle cut through and the zygoma divided. By pressing the tissues down firmly the operator was able to reach the second and third divisions as they emerge from the foramen rotundum and ovale. In these cases the relief had extended, if I remember correctly, over three or four years, and in one case five or six years. From the reports which are given in Boston, this appears to be a very successful operation.

To my mind, the question of interest is in regard to the pathological condition. If the disease is of central origin I do not see how any operation on the peripheral terminations of the nerves can be of service. Repeated operations, such as Dr. Deaver performed, of course, give temporary relief.

Dr. W. W. Keen: I quite agree with Dr. Mears that the question of the pathology is a most important one. In the cases where I have had a microscopical examination made the change has been found to be one of sclerosis. In one case there were spots of distinct hemorrhage into the nerve. These were almost macroscopic. I have never seen the inferior dental nerve so large as in this case. That patient had a return of the pain, and a second operation was done. So far as I could determine, a new nerve had formed, and, strange to say, there was a branch of this nerve which went inward through a foramen on the inner surface of the jaw. I saw no such foramen at the first operation. Dr. Dana some time ago published a paper in which he stated that he had found sclerosis of the vessels rather than of the nerve. However this may be, it seems to me clear that the sclerosis of the vessels or of the nerve is the chief thing and that this is distinctly a senile change. That it does not appear in early life we all know, but only in later life when sclerosis of other organs appear. This being the case, I think that the operation of choice should always be the peripheral operation. I should not think of endeavoring to remove or break up the Gasserian ganglion as a primary operation. I was told the other day that one of Mr. Rose's cases had shown symptoms of return, and this is what might be expected as the sclerosis begins rather in the periphery and works backward. While medicine offers no benefit in the majority of cases, we can, as a rule, assure the patient that an operation will afford at least one or two years of relief. I presume that some of Dr. Deaver's operations consisted simply in reaming out the

connective tissue about the stump of the nerve. This I have done in more than one case, and, although under the microscope no nervous tissue could be found in the material removed, the operation gave as much relief as followed a pure exsection of the nerve. This being the case; it seems to me that we should, as a general rule, endeavor to give relief by such a simple operation, rather than immediately to go to the foramen rotundum or ovale or within the skull and remove the Gasserian ganglion.

I noticed that Dr. Deaver referred to destruction of the ganglion as not a serious operation. I should consider it quite a serious operation, although there have not been a large number of deaths. Rose has done it six or seven times, with one or two deaths. Andrews four times without a death. Hartley once, with recovery, and Dr. Roberts once, with recovery. Besides this, two eyes, and possibly more have been destroyed. It seems to me that any operation involving so much traumatism is to be considered a very serious operation, and should not be undertaken except after the gravest consideration.

Dr. James M. Barton: As has been said by Dr. Mears, we have not yet arrived at the pathology of neuralgia. One suggestion is, that it is due to small aneurisms, which have been found in the diseased nerves. This view is supported by the results of the ligation of the external carotid for this affection. Nussbaum claimed that one-half of the cases are permanently cured.

I can also confirm what has been said by Dr. Keen. The most trifling operation on the nerve, the slightest stretching, even the division of the distal branches is apt to afford temporary relief, and the most serious operation will not do much more.

So rare, in my experience, is anything like permanent relief, that I exhibited before this Society, a few months ago, as something unusual, a case of neuralgia of the second branch, of thirteen years' duration in which I removed the nerve at the foramen rotundum, and where the relief had continued for five years. The man is still free from the disease.

Dr. Thomas G. Morton: I am at present attending a patient, who is now eighty-two years of age, on whom I operated some twenty years ago. After the excision he had entire relief for many years; then had a recurrence of pain, brought on apparently by a ride of five miles in a wagon which had no springs, in which he was severely jolted.

For the last ten or fifteen years, although enjoying, indeed, robust health, he has at times suffered intensely, and then, again, having entire immunity from pain. Now the suffering is only relieved by morphine injections. Swallowing, talking, any movement of the tongue, touching the skin of the face, or even the beard, provokes "thrusts of pain."

In another case—now more than twenty years since the operation—the patient has had entire freedom from pain. As a rule, sooner or later pain reappears; but in such cases there is no reason why the operation should not be repeated. Benefit is generally experienced from each operation, and for even a measure of relief patients are willing to submit to any treatment.

THE REPORT OF A CASE OF FRACTURE OF THE THYROID CARTILAGE.[1]

By WILLIAM J. TAYLOR, M. D.

[Surgeon to St. Agnes' Hospital; Assistant Surgeon to the Orthopœdic Hospital and Infirmary for Nervous Diseases, Philadelphia.]

CHARLES E., aged forty-three years, a carpenter, was admitted to the surgical ward of St. Agnes' Hospital on October 6, 1892, in a semi-conscious condition. He was unable to give an account of the accident, but a fellow workman reported that he had fallen a distance of about twenty feet, from a scaffold upon which he had been working. No one saw him fall but when he was discovered he was unconscious, and lying across a heavy piece of wood. When admitted into the hospital; a short time afterward, he was unconscious, could be roused from his stupor, but could give no account of himself. He was very much shocked. The right side of his face was badly contused, the right eye swollen and completely closed. He was

[1] Read before the Philadelphia Academy of Surgery, at the meeting of March 6, 1893, the President, Dr. Willlam Hunt, in the chair.

bleeding from the nose, mouth, and left ear, and his general appearance was that of a man suffering from a fracture of the base of the skull. The pupils were equal, and a very careful examination showed this diagnosis to be an error. He had great difficulty in breathing, could not swallow, the saliva ran out of the corners of his mouth, and when he attempted to speak his voice was husky and his articulation very indistinct; he could not speak above a whisper, and only that with the greatest pain and difficulty. There was little or no swelling of the neck, but when he regained complete consciousness he complained of great pain and discomfort in the throat.

A careful examination now revealed a fracture of the thyroid cartilage on the right side, extending from above downward about on a line with the insertion of the thyro-hyoid muscle and about two lines anterior to it. The amount of displacement was very slight, but the mobility of the fragments could be easily demonstrated, and the fragments displaced and replaced again by manipulation with the fingers.

Dr. Smock, the laryngologist to the hospital, very kindly examined him very shortly after his admission; and confirmed the diagnosis of fracture of the thyroid cartilage. He reported also a rupture of the tympanic membrane about at the extremity of the manubrium process of the malleus. The nose showed hemorrhagic points on the septum on both sides.

Dyspnœa was pronounced, but there was apparently no emphysema about the seat of the fracture or in the neck. His symptoms were severe, and the pain and discomfort very great, but I did not think them sufficiently so to demand immediate relief.

Dr. White, the resident surgeon, was instructed to make all preparations for instant tracheotomy, and to send for me if the symptoms should increase in severity. He was to use his own judgment, however, and to operate at once without waiting for me to arrive should the necessity arrive. No attempt whatever was made to apply a dressing. For some days the bleeding from the mouth persisted, and the difficulty in swallowing and dyspnœa continued, but gradually lessened, and by the end of three weeks was entirely gone. His voice still remained somewhat husky, but there was no longer pain or difficulty in swallowing. The left ear was treated by cleaning out the auditory canal with cotton, and insufflating daily aristol and boric acid.

MULTIPLE FRACTURE OF BOTH UPPER EXTREMITIES.[1]

By WILLIAM J. TAYLOR, M. D.

[Surgeon to St. Agnes' Hospital; Assistant to the Orthopœdic Hospital and Infirmary for Nervous Diseases, Philadelphia.]

MARGARET C., aged fifty-six, a widow, and by occupation a monthly nurse, was admitted to my ward at St. Agnes' Hospital on the evening of October 19, 1892 suffering from the most remarkable number of fractures, considering the amount of constitutional disturbance, it has ever been my fortune to see. She was going down the cellar stairway in the dark when she missed her footing and fell to the bottom, some eight or ten steps. From the nature of the injuries she must have put out her hands before her in the hope of breaking the fall.

She was unconscious for a short time, and was then brought to the hospital in a patrol wagon, but recovered sufficiently to walk from the wagon into the receiving ward.

Upon examination it was found that she had received a lacerated wound of the scalp, six inches long and extending down to the bone, and a deep lacerated wound of the lower lip about two inches in length. There was a fracture of the surgical neck of the left humerus and an oblique fracture of the middle one-third of its shaft; a contusion of the left elbow and a fracture of the lower end of both the radius and ulna of the same side. There was a supra-condyloid fracture of the right humerus extending into the elbow-joint, forming a T. A fracture of the upper third of the radius and of the ulna, and a fracture of the lower end of the radius. In spite of this great number of fractures and of the serious lacerated wounds she was able to walk into the hospital, and seemed to suffer compara-

[1] Read before the Philadelphia Academy of Surgery, at the meeting of March 6, 1893, the President, Dr. William Hunt, in the chair.

tively little pain. Her temperature was normal, her pulse good, and there was no evidence of shock such as would have been expected from the nature of her injuries

There was much difficulty experienced in adjusting and holding in place the different fractures, but with care and patience and plenty of plaster-of-Paris this was accomplished. Her recovery has been most satisfactory, and she has for all practical purposes full use of both arms.

Such an extensive number of fractures led me to suppose there must have been some serious lesion of the bones, but the most careful inquiries failed to give me any clue to such a state of affairs. She was a large, strong, and, apparently, perfectly healthy woman. She had never before had a fracture of a single bone, neither was there any history of fracture in any member of her family. She was borne in Ireland, and had lived there until a few years ago, and had always been in good health and a hard worker.

DISCUSSION.

Dr. H. R. Wharton: Some years ago the President investigated the subject of fracture of the larynx and proved that tracheotomy was indicated, and that patients usually did better after this operation.

I would ask the experience of members in regard to multiple fractures, whether they have found much constitutional disturbance or many cases of sudden death following multiple fracture. My own experience has been that generally patients do well. Last summer I had under treatment a boy six years old, who had fallen off of one of the tunnels of the B. & O. R. R., and sustained a compound fracture of the nose, fracture of both bones of each forearm, and fracture of both thighs about the middle of the shaft. The patient did perfectly well with normal temperature for a week. He was doing well when I saw him at 12 o'clock. In the evening of the same day the resident noticed that his breathing was peculiar, and an hour afteward the patient was moribund. He died of some cerebral complication. I thought that it might be a case of fat embolism which is said to follow fractures. I have seen another patient die very much in the same way with a simple fracture of the femur. No post-mortem was made in either case.

The President: The conclusion of the paper which I wrote on fracture of the thyroid cartilage was that where emphysema and bloody sputa were present there had been up to that time no recovery where tracheotomy had not been performed. I thought that tracheotomy should be done when the first symptoms were discovered. I found several cases similar to that reported by Dr. Taylor in which recovery followed without tracheotomy.

Dr. Thomas G. Morton: Some years ago I saw in consultation a lady, eighty-four years of age, who had gradually, during ten years, lost her vision from cataracts. Soon after this she sustained in a fall a fracture of both bones of the forearm, the humerus about the middle and the shaft of the femur near the great trochanter. Complete recovery from these injuries following showed such an excellent repair, that six months afterward I operated upon both eyes at the same sitting. Perfect vision followed in each, which continued until her death in her ninety-seventh year.

METATARSALGIA (MORTON'S PAINFUL AFFECTION OF THE FOOT), WITH AN ACCOUNT OF SIX CASES CURED BY OPERATION.[1]

Bx THOMAS S. K. MORTON, M. D.
[Professor of Surgery in the Philadelphia Polyclinic, etc.]

THE affection that has come to be best known as "Morton's Painful Affection of the Foot," or "Morton's Toe," was first described and a method of certain cure presented by Dr. Thomas G. Morton, of Philadelphia, in 1876, under the title of "A Peculiar Painful Affection of the Fourth Metatarso-phalangeal Articulation."[2] In subsequent publications[3] he has confirmed his views rela-

[1] Read before the Philadelphia Academy of Surgery, at the meeting of March 6, 1893, the President, Dr. William Hunt, in the chair.

[2] American Journal Medical Sciences, January, 1876.

[3] Surgery in the Pennsylvania Hospital, 1880, p. 107. Philadelphia Medical Times, October 2, 1886.

tive to cause and treatment, and reported large numbers of cases.

The disease under consideration may be described as a painful affection of the plantar digital nerves, directly caused by pressure upon or pinching of them by certain portions of the metatarso-phalangeal articulations—especially the fourth.

The reason for the fourth toe being the almost invariable seat of origin of the train of painful and neurotic symptoms to be described is ascribed to anatomical causes by Morton in the following language:

"The occurrence of neuralgia may be understood by a reference to the anatomy of the parts. The metatarso-phalangeal joints of the first, second, and third toes are found on almost a direct line with each other, while the head of the fourth metatarsal is from one-eighth to one-fourth of an inch behind the head of the third, and the head of the fifth is from three-eighths to half of an inch behind the head of the fourth; the joint of the third, therefore, is slightly in advance of the joint of the fourth, and the joint of the fifth is considerably behind the joint of the fourth.

"The fifth metatarsal joint is so much posterior to the fourth that the base of the first phalanx of the little toe is brought on a line with the head and neck of the fourth metatarsal, the head of the fifth metatarsal being opposed to the neck of the fourth.

"On account of the character of the peculiar tarsal articulation, there is very slight lateral motion in the first three metatarsal bones. The fourth has greater mobility, the fifth still more than the fourth, and in this respect it resembles the fifth metacarpal. Lateral pressure brings the head of the fifth metatarsal and the phalanx of the little toe into direct contact with the *head and neck of the fourth metatarsal*, and to some extent the extremity of the fifth metatarsal rolls above and under the fourth metatarsal.

"The mechanism of the affection now becomes apparent when we consider the nerve-supply of the parts. The branches of the external plantar nerve are fully distributed to the little toe and to the outer side of the fourth; there are also numerous branches of this nerve deeply lodged in between these toes, and they are liable not only to be unduly compressed, but pinched by a sudden twist of the anterior part of the foot. Any foot movement which may suddenly displace the toes, when confined in a shoe, may induce an attack of this neuralgia. In some cases no abnormality or other specific cause for the disease has been detected."

This explanation undoubtedly will account for the great majority of cases, and perhaps all could be ascribed to pinching of the nerves between the metacarpo-phalangeal articulation. Yet there have been reported a few cases where the transverse metatarsal ligament has appeared to be lax or ruptured, thus permitting the metatarsal heads to descend upon the nerves. Auguste-Poullosson, of Lyons, in 1889,[1] after reporting a typical case, says that "the cause of the affection is evidently a certain laxity of the traverse metatarsal ligament, which permits partial infraction of the arch formed by the heads of the five metatarsal bones, one of the middle ones, probably the third, becoming dislocated downward and compressing the nerves running along each side of it against the heads of the neighboring bones."

L. G. Guthrie[2], in writing of metatarsal neuralgia, states his belief that "under the influence of prolonged standing or walking in tight boots, the ligaments of one or more joints, metatarso-phalangeal or phalangeal only, become strained, slight sublaxation takes place, the nerves are stretched and pressed upon by the partially dislocated bones, and the characteristic pain is produced."

In reference to the supposed dislocations above mentioned, Morton says:

"The dislocation referred to is not a true dislocation, but is simply a twist of the toe, and a violent spasmodic condition of the muscles of the toe incident to the intense pain, simulating a dislocation, which, when the toe is compressed laterally and in its rolling between the third and fifth suddenly, presses upon and pinches the underlying plantar-nerve branch."

Edward F. Grün[3], himself a sufferer

[1] Lancet, March 2, 1889, p. 346.

[2] "On a Form of Painful Toe," Lancet, 1892, vol. i. p. 628.

[3] Lancet, April 6, 1889, p. 707.

from the affection, believes that the pain results from descent of the tarsal arch, which is accompanied by lengthening of the foot and spreading to the outer side, so that "where the weight comes on the member the foot spreads inordinately; the boot is not constructed to allow for so much spreading, and a frightful cramping pain is the result, causing the patient to remove the boot without regard to place or circumstances—often the most inconvenient."

E. H. Bradford[1] states that the results of treatment in these cases, as well as the symptoms and localization of the point of severest pain, make him agree with Morton, in believing the affection to be originated by pinching of the metatarsal nerve, rather than to flattening of the tarsal arch, as suggested by Poullosson. In none of his thirteen cases was any degree of flat-foot present.

In a large number of cases seen by me, in addition to those herein reported, it has not been possible to demonstrate any laxity of the metatarsal ligaments, and, while in a few the pain was referred to other of the metatarso-phalangeal joints than the fourth, yet upon careful manipulation it was always found that the pain was reflected from the fourth to the other joints. It must be conceded, of course, that laxity or rupture of the transverse ligament would predispose to injury of the nerves at the fourth joint by permitting greater motion of the overlapping bony points in that situation. However, while the exact etiology of the affection is of great scientific interest, clinically it is of small account, as excision of the fourth metatarso-phalangeal articulation, as originally proposed by Morton, or amputation of the fourth toe, including the corresponding metatarsal head, invariably has secured an absolute and permanent cure. No dissections of the diseased regions have yet been possible, nor have the nerves been in any case excised so that microscopical examination could be made. I have carefully examined a number of the joints that have been removed for the cure of the affection, and in no instance have been able to prove any anomaly or disease.

[1] "Metatarsal Neuralgia, or Morton's Affection of the Foot." Boston Med. and Surg. Journal, 1891, vol. ii. p. 52.

Metatarsalgia is, in its lesser degrees, a very common disease. Almost every one has suffered more or less, at times, from neuralgic twinges radiating from the joint in question. These mild cases occasionally develop into the more severe forms. In them occasional attacks of pain are often followed by periods of complete immunity.

Morton made extended inquires among retail shoe dealers and found "that this peculiar condition had not only been frequently recognized by them, but that it is also considered to be quite common. Almost every intelligent shoe retailer has seen a number of persons to whom this disease has been a source of frequent suffering, and who believe their malady to be beyond relief by medical art; indeed it would seem that in some of the most severe of the cases it has been found impossible to obtain the serious consideration of their condition by their medical attendants."

So recently as 1891 Bradford[1] has written:

"It is somewhat singular that an affection that is not infrequent in these days of thorough investigation of all ailments, should have attracted but little attention, either in the reseaches of surgeons or of neurologists. The cases are so usually classed among the ill-defined hysterical or nervous affections, and not thoroughly investigated; or they are deemed to be gouty, as in the minds of many practitioners, are frequently all affections of the toes."

The disease has not been observed before adolescence. Women are certainly more predisposed than are men, and its occurrence in the former sex I should judge to be almost twice as frequent as in the latter. One foot is most usually involved, especially in these cases apparently taking origin from an injury. But very frequently one foot is affected to an almost unbearable degree, while its fellow is but slightly involved. Neither right nor left foot appears to be most liable to involvement unless one or the other is constantly subjected to a motion, as in running certain sewing machines, looms, lathes, etc., while the other is not employed. In this case, as in one of my

[1] Loc. cit.

own, the pain developed in the foot so employed. When both feet become simultaneously affected that the cause will often be found in ill-fitting or tight shoes Middle life is the period at which the disease is most apt to develop or to become severe, The aged are by no means exempt, although in them more purely gouty or neuralgic forms are prone to occur, and persons at any age, so predisposed, appear to be much more liable to the affection—idiopathic or traumatic—than are others.

The influence of heredity is very marked. I know of several families in which a number of persons, mainly confined to the female sex, are similarly affected. It is interesting to note that in these instances some cases have arisen from twists or sprains of the foot, and others apparently idiopathically.

The exciting or immediate cause of metatarsalgia is usually excessive or unusual exercise of the feet while confined in new, tight, or ill-fitting shoes, as in walking over rough surfaces (mountain-climbing), dancing, playing lawn tennis, etc., or in changing from a firm-soled shoe to one that permits great motion of the metatarsal arch. When the heads of the metatarsal bones are rigidly held in contact by a tight shoe it is reasonable to believe that a very slight twist or wrench of the foot would bring great pressure to bear upon the sensitive branches of the digital nerve distributed upon and about them, and, particularly in those predisposed thereto, bring about a neuralgic and even neuritic condition. This once set up, and the nerves having become sensitive, swollen, or inflamed, ever so slight repetitions of the pressure or bruising are capable of originating the most agonizing suffering. Later, continuous or frequently recurring attacks of this pain, or actual ascent of neuritis, commence reflex contractions and other neurotic complications, perhaps of the gravest type, as witness in Case I. of my series, where the patient had become bed-ridden and severely neurasthenic.

So far as relates to symptomatology, I shall depend upon quoting a few more or less typical cases from the literature of the subject and upon the histories of my own operative cases, but may here mention that I regard the *imperative necessity of removing the shoe*, regardless of surroundings, when a paroxysm comes on, as a pathognomonic symptom of the disease. It may also be said that no evidence of the disease can usually be felt or seen, except that the parts are often of a bluish tint and cold, from venous stasis, and have a tendency to profuse perspiration.

CASE. I.—Miss I. F. S., aged thirty-one years, teacher, was brought to me by her physician, Dr. George L. Romine, of Lambertville, N. J., in June, 1892.

The following history was elicited: Family history excellent; she had always enjoyed the best of health and strength until the present trouble commenced. In July, 1890, she played lawn tennis for the greater portion of a day, coming down heavily on the balls of the feet many times after which she walked a short distance to her home, and felt greatly fatigued. After resting two hours she attempted to walk, and experienced a "queer sensation" along the outside of the left foot, a feeling "as if something had given way about half way between the toes and heel."

"In the evening I walked down town, but could scarcely return, for it was so hard to make my foot go. I felt as if retarded in some mysterious way. By the time I reached home a line of pain extended from the place above-mentioned all the way to my hip. Thinking I had sprained my foot, I applied the usual remedies. The next morning my foot felt rested, but during a short walk on the street the pain in my foot and limb returned.

"By this time the foot began to swell particularly along the outside, and in a few days had a reddish appearance. After a night's rest the swelling disappeared, and I was able to use my foot, with intervals of rest, in ordinary walking about the house. Each day it gave out after less use, so at the end of five days I called in our family physician, Dr. Romine, of Lambertville."

It was presumed that a ligament or tendon had been ruptured, and fixation by bandages resorted to. On August 7, these dressings were removed.

"The foot and limb were helpless, and the whole side of the foot felt so indescribably bad that it made me faint. A starched dressing was then put on the foot and limb to the knee. For four or five

days following I held my foot on a chair, but after that, during part of the day, on a pillow on the floor. Toward evening I had almost unbearable tingling in the foot, but this passed away on retiring. I never could rest my foot on the outside from the time of the accident without having that unbearable feeling in the feet, and at times the line of pain in the limb.

"At the end of four weeks the doctor told me to stand with my feet even. Never shall I forget what I suffered that day. The limb had shortened so that the heel was about two inches from the floor, and in trying to stretch it down the bottom of the foot pained and tingled dreadfully. I was completely exhausted and deathly sick.

"Crutches were then ordered, and I commenced my hard work of learning to walk.

"My foot was so bad on the side, and a line of dreadful pain extended from about two inches from the fourth toe along the side of the foot and to the knee. After a time the pain in the limb seemed better, but the whole side of the foot felt unspeakably bad. The uncomfortable sensation did not seem confined to any particular place on the side, as it did at first.

"The 1st of October the physician advised my going to school in order to overcome my nervousness, and take my mind from the foot. I wore a worsted slipper.

"The last of October the Doctor commenced the use of a battery every night —the interrupted current being used. The sponge was applied under and over the toes five minutes, five on each side of the heel, and five under the knee. The toes twitched a great deal, and I always dreaded when the sponge neared the fourth and fifth toes, for I felt the sting and jerk along the injured side, and it made me sick. I could bear only a light pressure there. When applied under the knee I felt the line of pain down the outside of the limb, and often the toes would jump. When the current passed down the inside of the limb it felt agreeable.

"My foot always felt badly on removing the shoe at night, and the limb above was very much swollen and glossy in appearance.

"The last of July, 1891, I took a short walk, without support, along the piazza. That night my foot pained up to the knee, and I was unable to touch it to the floor for more than a week. I was careful to take only a few steps at a time after that. At the end of a year this was all I could do.

"If I rubbed the foot, or put it down otherwise than just flat when I stepped, I was unable to use it afterward.

"I used crutches all the time at school, so as not to overtire my foot again; but in spite of all my care, I had that dreadful feeling on the side, and many days the line of pain up the limb.

"Often the foot had fits of shaking, which I could not control."

She continued thus helpless, using crutches for locomotion, and became thoroughly neurasthenic, until June, 1892, when I saw her in consultation with Dr. Romine. We agreed that the diagnosis was clearly the peculiar painful affection of the fourth metatarso-phalangeal articulation, and that the other symptoms were probably but those of reflex neuroses; also that excision of the joint offered the only means of relief. However, it was determined first to try the effect of an ointment composed of ichthyol and lanoline, together with fly blisters in the course of the affected nerves. These measures proving of no avail, in July I removed the joint. At the same time it was thought best to divide the tendo Achillis, as the heel had become much drawn up by contraction of the calf muscles, and did not relax even under anæsthesia.

From the moment of operation she never again experienced the old pain, and immediately began to gain flesh and strength under massage, hyper-nutrition, and rest in bed for three weeks. At the expiration of this period she was walking about unaided, and soon was as well and strong as ever. Union by first intention was secured, no weakness of the calf resulted, and the amount of retraction of the toe is about one-quarter of an inch. She now wears an ordinary shoe, and can make almost any exertion without discomfort.

CASE II.—N. C., aged thirty-two years, female, servant, native of Ireland. Family history, negative. Had always enjoyed good health until October, 1889,

when she tripped in going down stairs, and brought her left foot down violently in saving herself. Instantly she experienced an intense cutting pain in the region of the base of the fourth toe. The dorsum of the foot became black and blue, while the whole limb was affected with a dull burning pain. For several days she wore a slipper; then the discoloration gradually disappeared and pain became more endurable. But she had to cut every shoe that was worn, to prevent pressure upon this painful area. This painful sensation gradually extended from the original location up the front of the tibia, and became very severe in that situation. This misled a prominent surgeon to diagnose periostitis of the tibia, and cut down upon and scrape the bone. She remained in the hospital eight weeks, and was discharged unimproved. In February, 1891, another hospital surgeon cut down upon and chiseled away a portion of the tibia. Again no improvement followed.

Early in 1892 the patient entered the Polyclinic Hospital, willing to submit to anything to obtain relief. At this time she was almost helpless, exceedingly neurasthenic, and had lost much flesh. The scars of the previous operations were very evident. The entire leg was blue and cold and somewhat atrophied, but beyond this nothing was evident except that the fourth metatarsal phalangeal joint and its surroundings were exquisitely sensitive to motion or pressure. From this point the pain was reflected up through the entire sciatic distribution. She was put to bed and upon a milk diet for four weeks, while local counter-irritants and absorbents were applied, all to but little effect; the old pains and her general nervous condition persisted. I then excised the affected joint, and was amazed at her rapid progress to subsequent cure. Primary union was secured, and in three weeks she was walking about and entirely free from pain. Since then she has entirely recovered her former health and strength.

CASE III.—Mrs. E., aged thirty-five years, well-to-do farmer's wife, seen in consultation with Dr. George L. Romine. Family history good. She is of neurotic temperament, and faints easily. During last ten years she has been subject to attacks of neuralgia, affecting the left forearm. Three years ago she was seized with neuralgia, affecting the second and third fingers of the left hand. There was tenderness in the metacarpal region, whence pains were reflected up the forearm and arm, producing complete disability of the member. The parts were very painful to the touch, and slightly swollen. This condition persisted for four months, and then gradually disappeared. From this time until June, 1892, she remained well, when a marked attack of metatarsal neuralgia, affecting the fourth toe, supervened. This apparently did not follow an injury. The pain became continuous, and resisted all efforts for its relief, except when she laid down, when it would diminish or entirely disappeared. When I saw her, at the end of October, she had become bed-ridden, almost helpless, and exceedingly nervous, but nothing of disease was evident in the foot except the violent, unbearable pain that was invariably produced at the fourth metatarso-phalangeal articulation, upon the slightest pressing together or rolling upon each other of the outer metatarsal bones. At this time, even the weight of a stocking could not be tolerated upon the foot. The pain extended into the peroneal and sciatic nerves. She had lost fifty pounds in four months. The calf on affected side measured one and a half inches less than its fellow.

The affected joint was excised, primary union secured, and she steadily regained her usual health. Pain has disappeared, and she can walk with comfort.

A maternal aunt of Mrs. E. injured her foot eight years ago, and suffered in much the same manner as did the niece. She has never been able to secure relief, and to-day is scarce able to walk across a room without bringing on a severe attack of the pain.

A sister of the patient injured her foot ten years ago, and was then confined to her room for twelve months, because pain developed whenever the member was placed upon the ground. For five years she was unable to walk upon the street, while at the present time she cannot walk far without originating an attack of metatarsalgia, and has to be extremely cautious in walking over uneven surfaces.

CASE IV.—Mrs. S. C., aged forty-five

years, a missionary residing in Japan. She writes:

"When out walking in the city of Tokio, Japan, in the summer of 1888, and wearing a new pair of high-heeled shoes, I felt first a slight pain, which soon increased to severity, in my right foot in the region of the fourth metatarso-phalangeal articulation. The pain became so intense that I could walk no further. These paroxysms of pain continued to return with the slightest aggravating cause, the disease gradually becoming worse, so that for two years past, when at home, I have seldom had a shoe on my foot, and was not able to bear the loosest shoe while riding in a carriage, being almost always compelled to remove it after entering. When suffering the most intense pain it was accompanied with a general nervousness of my whole system. Upon removing my shoe all pain and nervousness soon ceased."

I removed the affected joint in May, 1892. In three weeks the patient was able to walk about with great freedom in ordinary shoes, and has since remained free of pain.

CASE V.—Mrs. R. T., aged thirty-two years, Canadian, housekeeper. Has suffered for five years from well marked metatarso-phalangeal neuralgia, involving fourth toe of left foot. No assignable cause. Attacks have been growing more frequent and severe progressively until she became almost invalided. Was compelled to remove shoe regardless of surroundings instantly upon superventionof the attack.

In December, 1892, I amputated the fourth toe together with the corresponding metatarsal head. In three weeks she was walking about as well as ever and has been entirely relieved of all discomfort.

CASE VI.—Lizzie T., a Russian, single, aged twenty-two years; mill hand. This woman works the treadle of a machine with right foot. Two years ago began having pain radiating from fourth toe. The frequency and severity of these attacks—necessitating removal of shoe—have increased steadily until she was entirely unable to work and had difficulty in walking.

In January, 1893, she entered the Polyclinic Hospital, and my resident, Dr. M. W. White, excised the affected joint under my supervision. Primary union occurred, and the cure has been complete.

Morton[1] gives the following graphic description of a case of metatarsalgia, written by a medical friend who had been a sufferer from the more severe form of the disease:

"I have suffered intensely at intervals from this affection for many years, and in all this time have never found medical man or layman who understood what I meant when I complained of it or alluded to it. It has been pronounced by surgeons who have examined my foot to be a subluxation or a malformation of the articular surface of the first phalanx of the fourth toe, where it articulates with the fourth metatarsal bone the concavity not being sufficiently concave. This I have long been convinced is an error.

"My own sensations have convinced me that the pain is caused by pressure upon a nerve, but what pressed upon the nerve I was unable to tell. The immediate necessity of removing the boot and the relief afforded by manipulating the foot in a manner learned by experience pointed to a dislocation; but the reduction of the displacement was never sufficiently sudden and marked to confirm the belief that there had been a dislocation.

"Now, after living for more than half a century, practiced my profession for over thirty years, and suffered half my life with an affection not understood and ranked with a disease so trifling as a corn, I find myself enlightened and the mystery cleared up by your valuable paper on the subject.

"The first paroxysm occurred in my boyhood, and was produced by tight lacing of skate straps. On unbuckling the straps, the 'cramp,' as I called it, was at first soon relieved and thought nothing of; but a continuance of this system of squeezing by tight straps and tight boots, and riding for hours on horseback with the flexors of the leg and foot in violent action and the toes turned in, the attacks became more frequent, more painful, and the abnormal condition of the parts became chronic. These were in my case undoubtedly the causes pre-disposing. The causes determining the accession of a

[1] Loc. cit.

paroxysm are the wearing of a badly fitting boot, especially if the sole be narrow; a long and fatiguing walk, particularly on a hot day over a hot pavement; a long ride on horseback; a wet boot sticking to the sock; a wet sock sticking to the toes; long-continued flexion of the knee-joint, as in a railroad car, carriage, or lecture-room; treading on an uneven surface, as a cobblestone pavement; and, should the nervous system be depressed from any cause, these exciting causes will act more powerfully.

"The symptoms of an attack in my case are most intense pain, 'cutting to the heart,' sickening, a feeling that it is unendurable, faintness, cold sweat, total incapacity for the time of directing the mind or will to any other subject, a horrible increase of torture on the use of the boot-jack; and all this with no redness, no swelling, no abrasion of the skin, no callosity, no visible displacement of bones, at least after removal of the boot.

"The suddenness of the attack is noteworthy. I have been obliged to drop everything and remove my boot, sometimes in company, sometimes in my carriage. I have even been obliged to sit down on the curbstone and remove the boot. I have dismounted from my horse and sent home for slippers before I could proceed. I have tied my horse to a tree and lain on the ground, unable to ride farther.

"I have spoken of a tight boot, and of removing the boot, but I have had tight boots which were great favorites, because they would not 'let my toe out of joint.'

"The remedies from which I have obtained relief are removal of the boot and then manipulating the toes—straightening them out. When inconvenient to take off the boot, I have found that grasping the foot tightly round the metatarsal region will answer; and I have sometimes worn a circlet of India rubber band, binding the foot round the instep. Putting on a dry boot and dry stocking is of great benefit, and the boot should be well sprinkled with powdered soapstone before putting it on. Frequently an attack has been relieved completely without other means than rest and a cup of strong tea."

Morton also reports the following from another medical friend:

"For several years previous to 1864 I had been subject to occasional dislocations of a relaxed joint in the fourth toe of my right foot. They had always occurred in walking, and the symptoms were perfectly distinct; the reduction, which was usually effected without difficulty, by simply 'working' the toe, was equally unmistakable.

"In the summer of that year I was climbing a mountain, when the joint became displaced; and, as it would speedily have slipped out again if reduced, I allowed it to remain luxated until I had finished the ascent and returned to the base, when the pain was so great as to make it necessary for me to ride home. After several hours of suffering, the joint gradually resumed its normal state.

"Since that time I do not remember that the luxation has ever taken place; but I have had many attacks of neuralgic pain in the part, coming on generally after exercise, but sometimes after sitting in one position, as in my carriage. Often exercise does not induce it. Heat, as from the pavements or the sand in summer, is a much more frequent cause. It begins gradually, and sometimes wears away in the same manner, but sometimes vanishes suddenly, as if by magic, without the use of any means of relief. The pressure of a boot always aggravates it; but it has attacked me while in bed at night. Diversion of the mind will often allay it, but it sometimes comes on again afterward with far greater severity.

"In 1869, while spending most of the summer at Atlantic City, I suffered more from this trouble than ever before or since. It would then often come on at night, after a day in town; and once or twice the attacks lasted more than twenty-four hours. So great was the annoyance from it, that I proposed amputation of the toe to a surgical friend, but he advised me against it. Since then it has been much less troublesome, though I have sometimes had it more or less every day for a week.

"Deep pressure over the metatarsophalangeal joint is painful, but does not bring on an attack unless long continued. Cold has given me more effectual relief than any other remedy I have tried."

The three following cases are quoted from the same source;

"In March, 1873, I was asked to see Miss H. S , aged twenty-six years, who while in Europe four years before, had injured her right foot by stepping upon a small stone. She said that she had at once experienced intense pain, which was soon followed by slight swelling and redness. From the date of the injury localized pain in the foot continued, especially while wearing a shoe. The pain was referred to the head of the fourth metatarsal bone. There was constant distress in the part, often of a sickening character. After wearing a shoe, pain came on with great intensity. At such times the shoe had to be instantly removed, the least delay causing a paroxysm of great suffering. The boot or shoe had to be removed so often that a slipper was substituted. A marked lameness was induced by the patient's endeavor to spare the foot in walking. The pain was confined to the joint of the fourth metatarsal bone with the base of the associated phalanx. Pressure in this region, or rolling the fourth and fifth toes upon each other, caused violent pain, which extended up the limb. It was severe when pressure was made upon the base of the first phalanx of the fourth toe, which could be prominently felt between the third and fifth toes."

"Dr. M. W. Alison, of Hagerstown, Maryland, called on me in the spring of 1875, seeking relief from neuralgia in his right foot, which had existed for years, and was gradually getting worse, and stated that he was willing and ready to submit even to amputation of the leg. He gave the following history:

"About six years ago I experienced an unpleasant, painful sensation in my right foot, which possibly originated in a strain: the pain was first observed in the fourth metatarso-phalangeal region; in the course of a fortnight it was followed by most violent pain, which was simply unbearable and so severe that it terminated in a convulsion. A painful condition of the parts followed, and with the least provocation (wearing a shoe or boot), sometimes without known cause, paroxysms of intense pain returned at various intervals, lasting from one to forty eight hours. The pain, with one or two exceptions, has been confined entirely to the section of the foot indicated. My suffering has been beyond all comprehension; very often I have been compelled to jump from my buggy or stop while walking, remove my boot, which has always been of ample size, apply ligatures to the limb or foot, use hypodermic injections of morphia, frictions, or call upon some one to assist me by standing on the foot. This affliction has been the burden of my life, and this burden has been increased after consulting many eminent medical men, who gave me no satisfaction as to the nature of the disease, nor even suggested a hope of relief. My health otherwise has been uniformly good. I am satisfied the cases you have had are similar to my own, save in the intensity of my sufferings, and I shall gladly submit to the operation you have suggested."

Mrs. C. H. K., of this city, a lady fifty years of age, gave me the following history: "'The queer feeling,' I have been accustomed to call it, which has been in my left foot for thirty years, is a painful condition. The pain is in and about the joint of the fourth toe, with occasional attacks of intense suffering, when the pain extends to the knee, and, if my shoe is not instantly removed when the attack comes, the pain reaches the hip. It does not matter whether I wear a large or a small shoe, as I have never worn a tight one, but it seems that the least pressure will produce the same result. Often my sufferings have been exceedingly acute, and come on without any warning. Once I was taken while walking in the street, and the agony was so great that I was compelled to rest on a stoop, remove my shoe, and walk some distance in my stocking alone, the pain running in a straight line to the hip joint. In September, 1868, while at the Academy of Music, I had an unusually severe attack, and, not removing my shoe as quick as I should have done, was obliged to walk to my carriage without the shoe, and suffered intensely for three hours. My eldest sister has been similarly affected still longer than myself, but in her right foot, same toe and joint. She has several times given up wearing shoes, but the attacks continued."

Charles K. Mills,[1] in a lecture upon

[1] Journal Nervous and Mental Diseases, vol. xv, p. 4.

"Pain in the Feet," relates the history of a typical case that was entirely relieved by the operation of Morton. A woman, in jumping upon rocks twisted her foot. The foot apparently was not injured, and she was soon about as usual. During the next two years, at intervals of from two to eight weeks, a peculiar pain in the foot would develop that would last two or three days. Two years later she injured the foot again in the same manner. After this the pain was seldom absent more than a few days, and each recurring attack was of increased violence. Again, two years later, the pain became almost constant. The pain was a dull, heavy, sickening ache, from the foot to the hip, and with a sharp pain through the foot. At times the ache would be limited to the foot, but the sharp pain was there constantly. Arising in the morning, the patient could not put her weight upon the foot until she had taken hold of it suddenly from the top and pressed it hard together, and held it in both hands with all her strength for some minutes. After exhausting every known local and general remedy, the fourth metatarso-phalangeal articulation was excised. The patient subsequently slowly became free of every vestige of the former pain, and was entirely restored to health.

Poullosson[1] describes an instance where a medical man, twenty-nine years of age, had suffered from this affection for some years. It gave no trouble when the foot was at rest and without a shoe, but was usually brought on by wearing boots and walking a good deal. It was much more likely to occur when going down than in going up hill. The pain came on suddenly, a feeling of something having given way in the feet accompanying the onset, together with a kind of grating sensation. After this the patient walked lame, for all pressure of the anterior portion of the sole of the foot to the ground was painful. If walking was persisted in the pain increased, till in a few moments it attained its maximum, rendering all further attempts at locomotion impossible.

Edmund Roughton[2] has reported the following case:

"A medical man, aged thirty-three years, complained that for eighteen months he had suffered from attacks of burning pain in the forepart of the sole of the left foot. The pain occurred several times a week, and was usually brought on by prolonged standing or by walking any considerable distance, and was so severe as sometimes to cause him to remove his boot and grasp the sole of his foot with his hand. On examining the foot, I found that the traverse arch formed by the heads of the metatarsal bones had sunk, so that a distinct convexity replaced the concavity normally found in this situation.

"In this case the patient had increased considerably in weight during the period of development of the symptoms, and his transverse metatarsal ligament had presumably been unequal to the increased strain."

E. H. Bradford[1] has reported a series of thirteen cases, none of which, however, were severe enough to demand operation. In these the symptoms were not in a single instance the result of traumatism, nor was any evidence of dislocation or other local change observable. These patients were all in enjoyment of excellent health, and in none were there evidences of gout or rheumatism.

TREATMENT.—The less severe forms of metatarsalgia may often be prevented from running into the more serious types by proper shoe construction or by wearing a narrow flannel bandage about the ball of the foot. Morton, whose suggestion the latter is, directs that the bandage be two inches wide, and long enough to wrap neatly and firmly about the metatarsus some five or six times. The end is pinned, and the stocking drawn over. This has given marked relief in a number of cases.

The shoes for persons suffering from this disease should be firm-soled, make no lateral pressure upon the metatarsus, yet have the instep tight enough to prevent the foot slipping forward. The great object of the shoemaker should be to prevent pressure, either lateral or antero-posterior, upon the metatarsal arch, and also to prevent any rolling motion of the outer metatarsal heads upon their fellows. A broad, rigid sole would appear

[1] Loc. cit.

[2] London Lancet, March 16, 1889, p. 553.

[1] Loc. cit.,

to best fulfil this last indication. Bradford proposes the use of digitated stockings in these cases, with a view of keeping the toes further apart. As the foot spreads when the weight of the body is thrown upon the member, it is apparent that the individual should be standing when the measurements for shoes are made, as has been advised by Grün.

The use of various pads in the shoe and about the toes, also such measures as the hollowing out of cavities in the sole opposite one or more of the metatarsal heads have been tried, but invariably found unsatisfactory. A variety of the affection calling for so much attention to secure comfort would clearly demand the certain cure to be afforded by operation.

In persons where a rheumatic or gouty diathesis may be suspected appropriate remedies for those disorders should be given a thorough trial before operative measures are resorted to. But when the condition is entirely of local mechanical origin the employment of general or local medicinal agents is useless. On the other hand prolonged rest in bed will benefit all cases more or less, and occasionally secure relief for long periods, or even permanently cure the milder phases of the disorder.

Operative treatment should be limited to excision of the metatarso-phalangeal articulation from which the neuralgia radiates, or, perhaps, to amputation of the corresponding toe above the joint, as have been recommended by Morton and endorsed by other writers. These procedures are among the safest and simplest in surgery. Of amputation of the toe, together with its metatarsal head, nothing more need be said than that by this measure the possibility of subsequent trouble arising from a tendency of the toe to retract and ride above or below its fellows is excluded. However, this heretofore occasionally troublesome sequel can be avoided by dividing the extensor and flexor tendons while excising the joint, as I have done in five cases with most satisfactory results.

Operation.—Primary union should be aimed at. To secure this the foot must be scrupulously cleansed. The nails should be trimmed short. Then soap, water, and nail-brush should be liberally applied. Following this, the member should be soaked in two and a half per cent. carbolic acid solution, and finally dressed in a moist carbolic dressing of the same strength until the surgeon is about to operate. Where the foot is especially foul it is my custom to finally dip it into a saturated solution of permanganate of potash until colored to a dark mahogany hue, and then transfer it to a saturated solution of oxalic acid until decolorized, before applying the temporary dressing. When the surgeon is about to operate the temporary dressing is removed and the parts given a final douche with 1 : 1000 sublimate solution.

A vertical incision from one and a half to two inches long is made, beginning over the proximal inter-phalangeal joint and extending upward in the centre line of the toe[1]. The extensor tendon now comes into view, and is divided. Another stroke of the knife carries the incision through its entire length down to the bone. The handle of the knife or other moderately blunt implement is then employed to separate the tissues from the upper and lateral portions of the joint. Next the blades of a powerful sharp pointed, narrow bladed, cutting pliers are pushed down on either side of the phalanx immediately below its base (hollow of the blades always towards the articulation), and this bone divided. The metatarsal bone is then similarly divided just above its head. The separated joint is now seized by bone forceps and dissected away from any remaining attachments. This done, the flexor tendons will be seen lying in the bottom of the wound, and should be picked up by forceps and divided with scissors. If hemhorrhage is severe and not controllable by moderate pressure of the parts, ligatures should be applied. I have never had occasion to apply a ligature in this operation, as the pressure of the dressing has always sufficed to control any oozing that might continue after the sutures had been applied. The wounded edges are next to be approximated—no drainage being required if asepsis has been maintained—by continuous or interrupted suture, as may be preferred. A gauze and cotton dressing is finally applied and

[1]The joint has also been excised through an incision in the sole, but the method is objectionable on many grounds.

bound firmly on with a wet gauze roller, care being observed to place little pads of the gauze in such positions as will hold the toe in its proper position during healing.

The foot should be kept considerably elevated for the first two days, after which it may be brought to the level of the bed. I prefer my cases to remain in bed or on a couch until the fourth or fifth day, when they may be permitted to sit up with the foot resting on a chair. At the end of a week the sutures are removed; two or three days after which the patient is permitted to move cautiously around, while at the termination of three weeks all restraint may be removed and a firmly healed wound and permanent cure confidently expected. No special form of shoe or particular care of the foot is afterward required.

In case suppuration should arise in the wound, the sutures should be at once removed, the wound cavity washed out with full strength peroxide of hydrogen solution, then with $\frac{1}{1000}$ corrosive sublimate solution, and gently stuffed with iodoform gauze. All of which should be repeated every one or two days until the wound closes by granulation.

In addition to the references given in the text the following may be mentioned to complete the bibliography of the subject:

Gross: *System of Surgery.*

Agnew's *Surgery.*

Erskine Mason: *Am. Journ. Med. Sci.* Oct., 1877.

Editorial, *N. Y. Med. Jour.*, Oct. 8, 1892, "Morton's Painful Affection of the Foot."

Roswell Park; *Med. News*, 1892; vol. ii, p. 406, "Morton's Affection of the Foot."

Meade C. Kemper: *Virginia Med. Monthly*, vol. viii, p. 522, "Case of Metatarsal Neuralgia."

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DISCUSSION.

Dr. W. W. Keen: This affection has not seemed to me to be so frequent. I have seen only one case—this was a lady about going to Brazil. I operated five years ago on both feet. Since then she has been able to walk perfectly well and to dance.

Four years ago I had an attack which I thought might be the same. This attack interested me in connection with the diagnosis, because I had every symptom that Dr. Morton has described. The attack came on about the time of my summer holiday, and I was unable to walk without limping from the excessive pain. When the pain came on I was compelled to go to my room or sit down where I happened to be, and remove the shoe. I had a pair of shoes made with a thicker and wider sole and a little larger, but without relief. When I came home I was tempted to have the operation done. I, however, consulted my friend, Dr. J. C. Wilson, who suggested a gouty origin, and put me on appropriate treatment, and the pain disappeared, and I have been perfectly well ever since. I mention this in connection with the diagnosis, as here there was the pathognomonic sign of having to sit down and remove the shoe when the pain came on.

Dr. Thomas G. Morton: As early as 1870 my attention was first directed to this painful affection of the foot, and I then felt satisfied that I had a malady which had not previously been described. In the *American Journal of the Medical Sciences* for January, 1876, I published an account of this painful local affection, and subsequently reported a number of cases which I had successfully operated upon. Later, in various journals, the subject received attention until at present the disease is generally understood. In 1891 Dr. E. H. Bradford published an interesting account of a number of cases which had come under his care, and more recently numerous authors have given their experience.

A medical man from Hagerstown, Md., once called upon me and stated that he was seeking for relief from a neuralgia of the foot, which was so terrible that he was willing even to submit to amputation of the limb. The only relief he obtained was by injections of morphia. The operation was completly successful, and the doctor went to his home on the third day afterward, and has never had any pain since.

I have generally found the disease in one foot; but occasionally in both; and have been operated on both feet at the same sitting. Now and then I have amputated the toe instead of resecting the

the joint. The pain in many cases is slight, and only requires a proper shoe and a flannel bandage to keep the toes from rolling; in others nothing except an operation will suffice. In regard to shoes, a shoemaker of this city told me that one of his customers had more than fifty pairs, hoping in each new pair to have greater relief.

The question has been raised as to whether the painful nerve might not be excised instead of excising the joint of the toe. I apprehend there would be great difficulty in finding the nerve; and unless all the soft parts surrounding the joints were removed, some branches would remain; while if the pain is due, as I think it is; to the peculiar relation of the fourth joint as compared with the third and the fifth, no treatment except joint removal will answer.

A METHOD OF OPERATING ABOUT THE FACE BY WHICH BUT LITTLE BLOOD ENTERS THE MOUTH.[1]

By W. W. KEEN, M.D.

I WISH to call attention to a method of operating about the face which is not generally followed, and which may be new to some. It is particularly applicable to epithelioma about the lip, of which I have had two severe cases in a comparatively short time. In one there was extensive epithelioma requiring removal of a portion of the upper lip, the lower lip and the cheek. The other case was one of epithelioma of the cheek, and is also of interest from the fact that the patient had originally been operated on forty years ago by Dr. George R. Morehouse. A microscopic examination was made at that time, and the tumor was said not to be epithelioma. When I saw the man the disease extended from the angle of the mouth back to the molar teeth, and from one jaw to the other. It was on the inside of the mouth exclusively, except at the angle where the entire thickness was involved. The external layer of the cheek seemed to be entirely free. In operating I placed the patient on a flat table with the operated side turned a little down and cut through the skin down to the mucous membrane, but not through the latter. I then secured all the vessels *before* opening into the mouth. In this way I prevented blood from entering the mouth and also lessened the total loss of blood. In this case Stenson's duct was involved in the operation. I found the duct and stitched it to the mucous membrane of the upper jaw, and there has not been the slightest trouble from fistula. The incision was a very wide V, the linear incision corresponding to the apex of the V being on the cheek, and the widest part is the base of the V inside the mouth. I am sure that those of you who try this method will find it satisfactory.

[1] Read before the Philadelphia Academy of Surgery, at the meeting of March 6, 1893, the President, Dr. William Hunt, in the chair.

A CASE OF APPENDICITIS.[1]

By WILLIAM HUNT, M. D.

THIS specimen was removed from a young girl who presented every sign of good health, but had been sent to the Pennsylvania Hospital by a physician outside, who had diagnosed possible stone in the bladder from the general symptoms. She was examined by the residents on admission, and they thought that they felt a stone. I saw the patient but once and I examined her for stone, but did not find one. I decided to let her rest and to repeat the examination under ether the following day. At three o'clock she was taken with severe pain in the lower part of the abdomen. At eight o'clock she seemed to be doing well, but at eleven o'clock there was a return of the symptoms, and she died in two or three hours.

The coroner's physician was sent for and made an examination, and the death was ascribed to "idiopathic peritonitis." I and Dr. Morton were telephoned to this effect and immediately sent back word to make further examination. It was then found that the appendix was large and swollen and had a large perforation in it. The abdomen was full of pus. It was afterward learned that she had been ailing for two weeks, but there were no symptoms referable to the appendix.

[1] Read before the Philadelphia Academy of Surgery, at the meeting of March 6, 1893, the President, Dr. William Hunt, in the chair.

DISCUSSION.

Dr. Thomas G. Morton: I have seen more than one case where it was impossible to make a diagnosis: the most remarkable instance was the following: In March, 1890, Dr. Da Costa and I were summoned to Trenton, N.J., to see a patient with Dr. Phillips, of that city. The patient was about forty-two years of age; he had been apparently in excellent health three days before; he became obstinately constipated and had nausea and had vomited; little or no abdominal pain and no swelling, a normal temperature, no chills, and pulse showed no acceleration. The bowel simply refused to respond to cathartics. Inquiry showed that there had been no former attack of pain in the appendix region. Calomel and fractional doses of podophyllin were given.

The following day there was a subnormal temperature and great prostration, but no evidence of local or general peritonitis, and the diagnosis could not be cleared up. Median exploratory abdominal section showed a foul abscess in the right iliac fossa; an inflamed gangrenous appendix; the ileum was covered with lymph, and for several inches showed structural change. Two days subsequently the patient died.

In reviewing this case I can see no way by which the nature of the case could have been determined; it seems hardly possible that perforative appendicitis and intestinal gangrene should not present at least some positive symptoms, yet in this instance, none such were present.

Dr. W. Joseph Hearn: I had a case at the Jefferson Hospital where the man had walked to the hospital the evening before, with a temperature of 101°. Dr. Keen saw him the next day, and we agreed that it was a case of appendicitis. Operation was done and a quart of pus evacuated. The man died subsequently.

Dr. T. S. K. Morton: In this connection, as illustrating how patients with very serious disease are able to perform almost incredible exertions, I may mention a case of strangulated hernia that walked to the Polyclinic Hospital to-day—quite a long distance—after his physician had made strong taxis for half an hour. The strangulation had existed five days, and when I operated, the gut was found gangrenous.

News and Miscellany.

An Austrian doctor says he practiced four years in the country and earned $250 a year.

St. Andrew's University, Edinburgh, has opened its doors to women, who can now obtain the degrees in medicine.

Parke, Davis & Co., supply the animal extracts now being employed in the treatment of myxœdema, and other affections.

Dr. S. T. Armstrong has been made Secretary of the Section in Marine Hygine and Quarantine, of the Pan-American.

Dr. Gihon is announced as the coming Surgeon-General U. S. Navy; the present incumbent is soon to retire on account of age.

Paris doctors call attention to the urethritis of bicyclists.

We have had several cases under treatment, and have not observed any difference from other gonorrhœas.

The Scotch student in Moral Philosophy must have been hard up for an example of special Providence, when he instanced the uptilted nose of the bull dog, enabling him to breathe without losing his grip.

Our latest advices from Harrisburg are to the effect that the anti-vivisectionist bill will not become a law. The bill forbidding the exhibition of freaks is in the same state of innocuous desuetude, and the milk bill is dead.

Dr. Egbert Guerency has been forced off the staff of the N. Y. City Homœpathic Hospital, by his Hahnemannian confrères. This is the result of Dr. Guerency's efforts to induce the alleged homœopathists to come out under their true colors, to do away with sectarian medicine and put themselves on the broad platform of unrestricted therapy. Dr. Guerency can well afford to bide his time, certain that the next generation will vindicate him.

The Times and Register.
A Weekly Journal of Medicine and Surgery.
WILLIAM F. WAUGH, A. M., M. D.,
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PHILADELPHIA, MAY 6, 1893.

[1]THE TREATMENT OF PERITYPHLITIS.

IN a late French exchange we have read an interesting discussion which has recently taken place, at the latest reunion of the Central Association of Swiss Physicians and Surgeons, the substance of which we here submit.

Kocher maintains that the greater number of cases of peritonitis are caused by perityphlitis, the symptoms being those of peritonitis, or a local perityphlitis The evolution of the malady is dominated by a series of circumstances over which the physician, to a certain degree, is master; such as the extent of intestinal repletion, repose of the body, etc. Kocher attaches more importance to complete repose of the intestine than to operative intervention. To effect this a restricted, absolute diet should be recommended with the administration of opium. In other words, our course should be prophylactic.

He says, however, that when we are assured of the presence of pus, it should be evacuated to avoid the danger of absorption of the toxines. He operated on fifty of these cases, in which purulent matter had formed, losing but two. There are cases, he says, in which, even though an exudation of pus is present, they may end happily by resorption of it, when in small quantities, or by making its way out through the intestinal canal. This author condemns the exploratory puncture, as it leaves the bowel and serous membrane exposed to danger of trauma. He adds that an operation is always called for, in chronic and in relapsing cases of perityphlitis.

M. Huguenin has observed 90 cases of perityphlitis. He concludes, that for every two cases we meet, but one will justify radical measures. He places great reliance on opium, and says that with this agent, combined with judicious and skillful operation, the mortality will be reduced from ten to one per hundred.

Kroenlein admits the difficulty of a rigorous definition in these cases, because all do not start in the appendix. Besides that, as many of those inflammatory tumors contain only some serum, or fibro-serous exudate, in a large number it will undergo spontaneous resolution; hence, thus it is only when the fluid is purulent and the appendix is perforated should an operation be undertaken. Kroenlein is not a partisan of preventive surgical operations for this condition; and condemns its performance during the acute stages, when the appendix is not yet perforated.

Wys advises absolute repose, ample opium, no purgatives. He is opposed to hasty intervention. He denies that even the presence of pus should always demand incision; and says that the eventual resorption of purulent matter is a possible eventuality.

M. Ribbert gave the anatomo-pathological researches in four hundred cases of perityphlitis. Fæcal concretions he found once in ten times. In but one was the appendix perforated by one of those.

[1] Revue Generale de Medicine de Chirurgie et d' Obstetrique. 12th April, '93.

Resorption of the liquid exudatives, he says, is certainly possible. Solid exudatives, he alleges, in time, assimilate with the connective tissues. Finally M. Sahli insists that the greater part of these cases recover without operation, when they are submitted to appropriate treatment. In his experience, the exploratory puncture, when it is made over the seat of the tumor, is inoffensive.

Annotations.

AN OLD TRICK REPEATED.

THE Homœopathic County Society has asked leave of the Board of Health to investigate its archives of contagious diseases to make some capital out of the relative mortality. When members of the homœopathic school habitually report every case of sore throat as diphtheria, it is easy enough to cipher out a very low mortality; and that this is done is too well-known to require demonstration.

Some comment has been occasioned by the undertaker in the Board appearing as a champion of the homœopathists; but it is presumed that Colonel Good is politician enough to know who are his friends.

THE CLERGY AND PRACTICAL HYGIENE.

THE clergy of Philadelphia have organized to aid in securing a better condition for the city. Pure water, thorough street cleaning and the proper removal of garbage, are among the objects sought. Rev. Dr. McConnell said that nothing was to be expected from Councils, controlled by mercenary corporations. The Mayor was the one man responsible for the state of affairs. He suggested that 150 of the clergy wait on the Mayor and urge upon him the importance of exercising his full powers.

It is a hopeful sign of the times, when the clergy are found advocating practical hygiene, and we hope that members of our own profession will be as diligent in arousing the community to a sense of its danger, and its duties.

RAGS.

DR. PAUL GIBIER (*Ther. Review*) was asked to examine some "disinfected" old German rags, imported into New York from Bremen. The microscope showed among other things, blood cells and bacteria. Cultivation developed colonies of eleven different micro-organisms, found alive, on these "disinfected" rags! Among them were the bacilli of tuberculosis, staphylococcus albus and a streptococcus resembling that of erysipelas and pathogenic for rabbits. The living germs in the thirty grains of rags were not less in number than 200,000,000 to 400,000,000. Dr. Gibier concluded that the rags came from a hospital.

A reference to our files will show that we have most earnestly protested against the importation of foreign rags during epidemic prevalence in Europe, and warned against the trust in disinfection.

Society Notes.

At the Clinical Society of Maryland, March 3, Dr. J. H. Branham read a paper on

EXCISION OF THE PILE-BEARING MEMBRANE FOR HEMORRHOIDS (WHITEHEAD'S OPERATION.)

An advance in the treatment of hemorrhoids was undoubtedly made in 1886 when Whitehead reported his method of total excision of the pile-bearing membrane to the British Medical Society. At that time he had operated on three hundred cases with uniformly good results. The cases which should be submitted to this operation are those severe ones in which the disease is extensive, involving the whole circumference of the mucous membrane lining the lower part of the rectum. Dr. Branham has employed the operation for over three years and while the number of his cases is not large, the results have been very satisfactory and he strongly favors the method although it has been condemned by nearly all the prominent rectal specialists. The different steps in the operation were described. A 1-2000 solution of bichloride of mercury is the antiseptic used. The wound is closed by a continuous cat-gut

suture carried through the skin and the tissues at the bottom of the wound and through the severed mucous membrane. Dr. Branham's cases number fifteen. In no instance has the hemorrhage been severe and in none has there been secondary hemorrhage. No abscess or septic infection occurred in these cases. Union was primary in most of the cases, but a slight suppuration occurred in several instances. The advantages of this operation over other operations, especially the ligature and the clamp and cautery, are, that the ligature leaves the wound open to granulate and is more liable to infection and secondary hemorrhage, is less thorough and is apt to be followed by a return. The clamp and cautery, while leaving the wound at first aseptic, is followed by a large granulation and consequently is more liable to cause contraction with symptoms of stricture.

Dr. S. T. Earle did not think that as a rule rectal specialists condemned the operation. They simply did not recommend it in all cases of hemorrhoids. They nearly all speak of it in high terms in cases for which it is especially adapted. Dr. Earle had done the operation repeatedly, but only finds it necessary in about one out of six cases. He limits his cases to those where there is a varicose condition of the systemic veins together with internal hemorrhoids ; in this condition no other operation can take its place. He has had in one case, where there was considerable prolapse of the mucous membrane together with the hemorrhoids, a return of the prolapse in one portion after excision by Whitehead's method. This prolaspe was excised and there was no further trouble. Dr. Earle has never met with any hemorrhage to speak of in this operation and never had any secondary hemorrhage to occur. This operation is unnecessary in the majority of cases. Where there are distinct and separate internal hemorrhoids it is much easier to excise them and the results are just as good.

Dr. Hunter Robb took exception to the use of bichloride of mercury for disinfecting the rectal mucous membrane, and to the use of cat-gut as a suture material. From the uniformly fatal results produced by corrosive sublimate in irrigating the peritoneal cavity of dogs with solutions of 1-60,000, he is inclined now to hesitate before employing this agent on mucous, serous or incised surfaces. It has been proven that corrosive sublimate in solution even as weak as 1-60,000 will produce a superficial necrosis of the tissues, and it has also been shown that even in strengths of 1-2000 or 1-3000 the drug is not always germicidal in its action. It would not seem advisable therefore to use a substance that causes destruction of the tissues, when in addition there is no certainty that the micro-organisms will be killed. By producing a necrosis of the tissues the normal resistance of the part would be interferred with and any virulent bacteria that might originally have been present or those that came subsequently in contact with the wounded surface would be much more likely to give rise to an infection of the part. He said that he had repeatedly tried, with some modifications, Dr. Halsted's experiments of irrigating the peritoneal cavity of dogs with bichloride of mercury. He had used 700 c.c. of freshly made aqueous solution of corrosive sublimate in strengths of 1-40,000 and 1-60,000. Immediately after using one of these solutions the peritoneal cavity was irrigated with the same quantity of sterile warm water, and then sponged as dry as possible. In from twelve hours to four or five days the animals all died. The lesions found at the autopsy were those produced by the toxic effects of corrosive sublimate. They consisted of marked diphtheritic deposits on the intestinal mucous membrane with intense hyperaemia, particularly in the large intestine and rectum. Altough in some instances solutions of bichloride of mercury may be used in the peritoneal cavity without any unfavorable sequel, the results of these experiments with dilute solutions would necessarily lead one to be most careful, since the susceptibility of a given individual to its evil effects can never be predicted.

As to the use of cat-gut, it seemed to him that it has been clearly proven by the experiments made by Dr. Ghrisky and himself that this substance is a most favorable suture material for micro-organismal invasion, and besides it is impossible to be absolutely sure of sterilizing a cat-gut sufficiently strong to be of use. In their experience silk-worm gut had

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Original Articles.

A CASE OF CHOREA IN INFANCY.

By HAROLD N. MOYER, M. D.,

CHICAGO, ILLS.

MOST writers are agreed in stating that chorea is very rare under five years of age, though congenital cases have been reported by Richter and Fox, and Simon has met with the disease in children but a few days old. The condition is, however, so exceptional that any authentic case is worthy of record. S. C. presented herself at the clinic for nervous diseases in Rush Medical College; she was accompanied by her father and mother. She was fifteen years of age, had menstruated once, and was fairly developed for her age. There was no neurotic heredity. Her birth was natural, was not prolonged, and no instruments were used. Nothing wrong was observed until the child was six months old, at which time she began to sit up. It was then noticed that there were irregular movements of the arms, and there was a tendency of the head to roll or fall to one side. The parents are positive that there was no inability to move the head or extremities, but simply disorderly movements similar to those she now exhibits. There was no history of injury or inter-current sickness. She was a well developed, healthy infant. The movements were always confined to the upper extremities and the head.

As she enters the room, the head is carried considerably to the right and forward. She can straighten the head without much effort, though in doing so there are irregular movements of the head that are quite characteristic of chorea, being irregular and jerky in character. The head can be carried forward or backward, or to the right, to a normal degree, but the movements to the left are somewhat restricted, and there is some tension of the right sterno-mastoid. Co-ordination is normal in both upper and lower extermities. With the eyes closed she can bring the tips of her fingers together, though the effort to do so excites the irregular choreiform movements. These seem to be largely confined to the arms, shoulders and muscles of the neck. The forearms and hands as well as the lower extremities being quite free. Station with eyes closed was well maintained. The deep reflexes were normal, as was sensation. A careful examination of the electrical reactions of the upper arm and neck muscles showed no material alteration of the electrical reactions with either current; sensation was normal ; the pupils reacted normally to light and accommodation ; vision was good in both eyes. Ophthalmoscopic examination showed a normal fundus. The intelligence of the patient

was good ; she has attended school since her sixth year, and is as far advanced as the average pupil of her age. The voice is rough and hoarse, and sentences are spoken in the jerky, irregular way, characteristic of chorea of the larynx. An effort to examine the movements of the vocal cords failed, owing to the inability to control the muscles of the throat and tongue.

The parents state that the progress of the disease has been for the better with the exception of occasional exacerbations. The muscular movements are better adjusted than formerly, and in eating she does not spill her food as she did. In this, the case is like all others of inveterate chorea in which the irregular movements are estimated and the willed movements is made at just the right time.

The case seems to be one of pure chorea and negatives the conclusion of some writers that these early, inveterate choreas are really forms of disseminated sclerosis. Indeed all of the essential features of the latter disease are absent.

A SUMMARY OF ELECTRO-THERAPEUTIC WORK IN A PRIVATE HOSPITAL.[1]

By G. BETTON MASSEY, M. D.,
PHILADELPHIA.

THE recent growth of private hospitals devoted to abdominal surgery and other operative procedures deserves attention, as indicative of an increased appreciation on the part of the profession of the responsibilities of its work. These numerous institutions have risen in response to a real need. The conscientious surgeon is no longer content to subject his patient and his reputation to results necessarily attending operations in offices, private houses, hotels and public hospitals, the latter primarily intended for the alleviation of the poor. A refinement of technique that would insure the best results, required the creation of a machine adapted to the highest quality of work. It is not a little surprising that this most ordinary provision of a proper means for effective work in relieving and curing human suffering should have been so long neglected by the medical profession, while the meanest trades that minister to the wants and vanities of the race have been housed in light and airy apartments, specially arranged for their proper and convenient prosecution.

The private hospitals for major operations have come, and have justified themselves. An extension of this sensible idea now presses upon the profession. If major surgery and the surgery of last resort needs this environment for its success, why should we neglect to supply analogous armaments to the work of curing diseases by conservative means?

There is, in fact, a double reason for such establishments, for the re-enforcement and enlargement of our power to actually cure diseased organs not only leads to greater success in such high work, but lessens also our need to resort to the cruder methods of amputation and removal of parts of the human body yet capable of restoration to health.

An establishment thus devoted to the highest development of the possibilities of electricity and allied agencies in medicine and surgery has, therefore, a reason for being in the mere fact that to be well equipped is an important part of the battle in any special line of medical study and art. It has also a reason for existence, more peculiar to itself, in the fact that the principal remedy in its equipment is itself in a transition state, and yet but imperfectly understood. To understand and apply in the most successful manner what is already known of the remedy requires technical knowledge of no mean extent, costly apparatus, and particular facilities; and when the extension of our knowledge of the agent is also considered, the value of enlarged facilities is even more evident. It is true that many of the uses of electricity in medicine may be prescribed and applied by a physician without an extensive knowledge of the agent, just as he prescribes a ready-made pill, but the higher possibilities of the advancement of therapeutic knowledge in this way are as impossible as that a mere user of the telephone could have done Edison's work.

It was such considerations that determined the establishment of a private hospital for the development of electro-therapeutics in this city, and the cordial co-

[1] Read before the Philadelphia County Medical Society, April 26th, 1893.

operation in the work by many members of the profession has already enabled me to present a brief summary of the results accomplished.

A variety of cases have been under treatment, in the majority of which electricity has formed the principal therapeutic agent, though a not inconsiderable number have received electrical applications as a secondary part of the treatment; rest, massage, regulated exercise and internal medication being associated with them.

Fibroid Tumors of the Uterus.—Twenty cases of myo-fibromata of the uterus were admitted, presenting many variations of the affection. Of the twenty cases, fifteen were of the ordinary solid varieties, to which the Apostoli method is now generally regarded as applicable.

The results attained in these fifteen cases of solid interstitial and subperitoneal growths were as follows: No further growth occurred in any, and a complete symptomatic cure was obtained in each. Of these fifteen tumors thus symptomatically cured, two were also anatomically cured, the growths disappearing entirely in each; ten were greatly reduced in size; two slightly reduced in size (both being still under treatment); and one was not affected as to size.

The five remaining cases were all intra-uterine growths, two being solid polypi with small pedicles. The latter were brought into the vagina by the use of faradic currents and ergot and removed by torsion and division, after which the cavity of the uterus was treated by intra-uterine galvanic currents to prevent a possible re-growth. Three cases were cystic intra-uterine growths of the most formidable kind described. It is well known at present that cystic growths as a rule are not amenable to electricity, and after attempting relief by external methods in one of these a lack of success caused me to refer it to a surgeon. The second intra-uterine cystic growth, forming a tumor as large as an adult head, having been referred to me by a prominent surgeon, was treated by the intra-uterine methods with unfortunate results, owing to a failure to maintain asepsis. Death occurred from septicæmia two weeks after admission to the private hospital, as elsewhere reported, the sepsis having been received during office practice.

The third intra-uterine cystic tumor, and the final one of this list, was almost an exact counterpart of this fatal case, though the spongy intra-uterine mass was vascular. This lady was sent to me by a surgeon who recognized the difficulties attending hysterectomy with a widely dilated cervix, even if she had consented to the operation. After mature deliberation and attempts to enucleate piecemeal, which were desisted from owing to frightful hemorrhage, I decided to apply strong, necrosing currents from 400 to 600 ma. directly to the presenting portions of the mass at the external and internal os, being convinced of my ability to maintain a reasonably aseptic condition by continuous irrigation, a suggestion which I owe to Dr. Slocum. These currents, applied after the bipolar methods, practically dissolve tissues in the immediate path of the current and produce a coagulated condition of living tissue at the periphery of the destroyed part that in itself is a bar to septic absorption for a time. Under this treatment, the whole tumor was gradually removed, without a drop of blood as a rule, and at the present time the uterus is almost normal in size.

Reserving an opinion on the future of electricity in cystic growths of the uterus, it will be seen that these statistics do even more than corroborate Apostoli's claims, for at least two of the cured cases disappeared completely by absorption.

Chronic Metritis.—In spite of the prevalent impression that chronic catarrhal metritis is a rare disease and relatively unimportant as compared with inflammatory conditions of the appendages, eight cases admitted to the institution were diagnosed as suffering primarily from this affection. In seven of these the diagnosis was corroborated by the therapeutic evidence of relief of symptoms and restoration of health after cure of the local disease of the uterus. Each of these cases of cured metritis, and one case not relieved, with a single exception, showed a general impairment of the health amounting in some cases to pronounced nervous prostration, and in the treatment employed the disturbance of the nervous system received ample recog-

nition. Mere office treatment with electricity would doubtless have been unavailing in such cases. The nervous symptoms demanded their share of attention; yet had not a gynecological electrical treatment been associated with the rest, massage, and general electricity, a failure to relieve would have been equally certain. This class of cases is a continual reminder of the need of the practical association of a gynecological and neurological training in the worker in the diseases of women. The physical and the nervous woman are conjoined by nature in both health and disease, and no more nosological classification will separate what nature has thus joined together.

Two of these cases were samples of that unfortunately increasing number of women whose relatively normal ovaries have been removed for what was really uterine disease, and I regret to say that the only instance of failure to attain a practical cure was in one of these. A persistent uterine leucorrhœa had continued in this case two years after removal of both ovaries. The discharge was purulent, and emitted an odor so unusually offensive, though unlike that from carcinoma, that I suspected its origin to be an infected ligature at the uterine end of one of the cut tubes.

Neurasthenia, Hysteria and Nervous Prostration.—Seventeen cases of the allied affections of neurasthenia, hysteria and nervous prostration were admitted to the institution, and in their treatment electricity was made to take a more important role than is usually given it. Recognizing the self evident fact that nutritive disorders play an important part in the pathology of these affections, and that in some of them the real affection is an anto-intoxication of the system from imperfect action of the organs of digestion, assimilation and excretion, these organs and their controlling nerve plexuses were subjected to the actions of galvanic currents of an amperage hitherto unused in such methods. The results have proven the great value of this modification of the rest treatment, rendering cases amendable to it that were failures under the severe stress of mere enforced rest, seclusion and massage. Experience has dictated also that the faradic current usually employed in these cases as a general muscular and sensory stimulant is best replaced by the galvanic current applied with a large flexible pad as active electrode, well soaped to render its labile action agreeable. The surface reaction is far greater than that possible in the usual faradic method, and to this is added a stimulation of deeper structures by direct chemical changes that is possible only with this current.

Perimetric Inflammation. — Two cases of perimetric inflammatory deposits associated with the adhesions of old pelvic peritonitis were admitted and treated mainly by the vagino-abdominal method. The most successful result was attained in the case in which the cataphoretic transmission of potassium iodide through the parts was used in connection with the current, old adhesions being loosened, and painful cellulitic deposits and enlarged tubes rendered painless and reduced in size. The addition of a resolvent agent so well known as iodine to the absorbent action of the galvanic current cannot be other than extremely valuable in this class of work.

Malignant Growths.—Two cases of sarcoma of the fundus uteri were under treatment for a time, without results that amounted to more than moderate palliation. If electricity has a field of usefulness in carcinoma it is only when the seat of disease can be more readily reached, as in such cases as cancer of the cervix. An experience gained elsewhere convinces me that the palliative effects of electricity in cancerous conditions of the cervix are very valuable, and they may even be curative when the disease is still distinctly local.

Desquamative Enteritis. — Three cases admitted into the institution suffering from prostration and chronic invalidism supposed to be due to disease of the uterus and ovaries, proved to be instances of desquamative enteritis. One of these had been treated for fifteen years for ovarian disease by some of the most prominent practitioners in the country without the true nature of the disease being suspected, and another had been mistakenly diagnosed and treated for five years. A study and examination of the stools, which is invariably made in ob-

scure cases, revealed the true character of the trouble; a chronic desquamative inflammation of some portion of the intestinal tract, usually the colon. In one of these a pulsating tumor lay in the left hypochondriac region, doubtless consisting of thickened membrane and enlarged glands lying over the abdominal aorta. In another case the pulsation was also manifest, and all the cases were bronzed to a varied degree. One was discharged much improved by a treatment consisting of the nitro-hydrochloric acid, arsenic, external galvanic currents and regulation of the diet, and two cases are improving under treatment of a similar character.

My experience in this affection has convinced me that many cases remain undiagnosed by physicians who neglect to avail themselves of the signal aid given in obscure chronic diseases by systematic examination of the alvine discharges.

MISCELLANEOUS.—Other cases admitted presented instances of ovaritis, menorrhalgia, chlorosis, pernicions anæmia, obstruction of the bowels, meningitis, chorea, multiple neuritis, musculo-spiral-spasm, hemiplegia, locomotor ataxia, etc., in some of which excellent results were obtained, but as the number of each was limited, no general deductions from them will be presented at the present time.

212 SOUTH FIFTEENTH STREET.

ILLINOIS STATE HOSPITAL NOTES.

BY DR. S. V. CLEVENGER.

[Medical Superintendent Illinois Eastern Hospital for the Insane.]

IN this series will be recorded, from time to time, items concerning nervous and mental diseases, gathered from experiences in the Illinois Eastern State Hospital for the Insane, at Kankakee.

It is the custom here to at once notify relatives of patients upon anything occurring to the latter, such as illnesses, or other changes from the ordinary. In this way the patient's friends are enabled to co-operate in their care and are not so often shocked by unlooked for events.

Folie a deux. An insane mother visited her daughter, who is a patient here, adjudged insane through the testimony of her sisters. Both mother and child have delusions concerning the same matters and most judicious handling was required to separate the two, as they insisted upon being allowed to leave the institution together. The mother is better able to control herself abroad and so is allowed her freedom, but she has imbibed her delusions from her daughter, who grows quite violent at times. The French announcement of this imparted manifestation of insanity affords the name by which it is known, *folie a deux.*

Insanities instituted by or complicated with alcoholism frequently cause asylum physicians more than ordinary solicitude. Under the watch and restraint of hospital sojourn and their gradual admission to parole, with occasional breaks thereof, many such patients assume to all appearances their original mental conditions. They, to superficial observers, are perfectly sane; many work cheerfully in the shops and talk quite intelligently about the possibility of relapses if allowed to go. But a large percentage are importunate, and these are the least to be trusted, for their anxiety to flit is born of their inability to gauge their will power to resist temptation, and back they come, not infrequently with newspaper or other criticism of the hospital authorities for having liberated such a dangerous character. These same critics are just as liable to write up sensational comments on the injustice of keeping perfectly sane persons at the behest of relatives who, the critics affirm, have some pecuniary motive in the patient being deprived of his liberty. Nor is the trouble taken to inquire whether the county is not charged with the case as a pauper or not.

When *habeas corpus* proceedings are begun, the natural inference is that there must be some malign reason for the detention. Probably it is just as well in the long run that the public should be suspicious, but the conscientious hospital physicians are put to unnecessary trouble in explaining matters of pathology and general medical experience to laymen who are much more familiar with business affairs.

The hospital physicians will congratulate themselves that cases of this kind are improving, and discuss the advisability of trusting them on parole prelim-

inary to letting them go home, while cogitating over the history records of domestic horrors occurring previous to commitment; such things as attempted wife murder, brutality to children, improvidence to a criminal degree; the wife usually faring the worse, though when he is not drinking she claims her husband is the "best and kindest of men;" the mother coming next as sharer of abuse from the alcoholic insane.

Notwithstanding all this, such near relations often beset those in charge of the hospital to liberate their husbands or sons; poor, ignorant creatures, because they can only see the hopeful side of matters for themselves, and cannot appreciate the vast fund of information possessed by the physician as to the frequently disastrous consequences of too early discharges, or, sometimes, any discharge at all.

I have known the alcoholic insane to be apparently sane only while at their asylum home, and when, even after ten years of trial, they were allowed to return home, they would resume all their bad habits, such as furniture smashing, chasing the family into the streets with axes or knives, and, after being returned to the asylum in a maniacal state, they would resume all their apparent sanity and sweetness of disposition, which arouse the suspicion of the visitor that some unworthy motive on the part of somebody withholds so useful a person from society at large.

Among the sadly comic instances of this kind appear liberations after carefully weighing probabilities and listening to the threats, entreaties and promises of the family and the patient, against the better judgment and misgivings of the physicians; and when something does occur from the risk, as all too often happens, forthwith not only the public but the relatives censure the weakness of the doctors for having listened to them at all. Scylla and Charybdis are best avoided by refusing to travel between them and adopting a perfectly independent course with reference to the patient's best interests, deferring to family pleadings only so far as it is safe at all to do so.

A washerwoman, who had about as much experience with the inner life of a large city as some physicians acquire, used to dub the defects produced by alcoholism as "street angels and home devils."

KANKAKEE, ILL., April 6, 1893.

MECHANICAL TREATMENT OF LOCOMOTOR ATAXY.

BY DR. REUBEN HIRSHBERG.[1]

THE treatment of locomotor ataxy has made real progress in recent years. In our own time, nevertheless, the prognosis of this malady remains yet very grave; as serious indeed as in the time of Romberg, who said of all *tabitique* patients that with them all therapeutic effort was useless [2]

Such therapeutic nihilism would not be justified to-day, although anatomical observations and anatomo-physiological studies most assuredly convince us that we are impotent to reach the fundamental pathogeny of the malady, *i. e.*, the sclerosis of the posterior columns of the spinal cord. But we do know, better than did our fathers, how to relieve the symptoms and secure to our patients a prolongation of life. Since the time of Duchenne and Romberg, we have come to recognize locomotor ataxy as a clinical entity, and our anatomical and pathological knowledge has been very considerably enlarged. Since the time of these two distinguished authorities, we have had four other names intimately identified with the disease of *tabes-dorsalis*, *viz.*: Erb, Charcot, Westphal and Leyden. We are now better acquainted with the initial period of tabes, which knowledge the better enables us to institute such measures as will aid us in moderating the acuteness of its course. We know, too, that with the vast majority of the ataxic, the progressive symptoms may take on a very chronic course; that the disease may be arrested for many years in the course of its development, that certain symptoms may disappear, and further that its most painful manifestations may become so attenuated that

[1] Translated from the French (*Bulletin Generale de Therapeutique*) by Thomas H. Manley, A. M., M. D., Visiting Surgeon to the Harlem Hospital, etc., New York.

[2] Ueber die Behandlung der "Tab. Dorsal.," in *Leyden Wochenschrift*, 1892, No. 17.

we may say our patient is at least temporarily cured.—*Tabes Benin* of Charcot.

Above all things, it has been the symptomatic treatment of tabes which has made great progress of late years. The baths of La Malon in France and of Mannheim in Germany have incontestably exercised a most salutary effect. The discovery of the new analgesics of the aromatic series, in particular acetanilide, has exercised an enormous influence against its fugitive pains, which it relieves without, like morphine, disturbing the digestion and exercising a disastrous influence on the central nervous system. We may mention the suspension, by Motchoulkowski (Odessa), which, judiciously applied in France and elsewhere, has certainly given excellent results against, not only the torturing pains, but other symptoms of *tabes-dorsalis* as well.

Brown-Sequard's method, hypodermic injection of the extracts from testicles of animals, has also been utilized in this malady. Dr. Constantine Paul has noted remarkable benefit from the hypodermic employment of an extract made from the brain-substance of the sheep. But we have tried this latter many times in which the results were entirely *nil.* Nor have we observed any benefit from the extracts of the animal testicle, and we are astonished to hear from the celebrated professor of the College of France, that with the systematic use of this testicular juice, cure was the rule.

No treatment with which we are familiar will reach the root of the malady, the sclerosis of the nerve-marrow. Hence we abandon the hope of effecting a permanent cure of this serious malady with any means at our command.

The general, physical and psychical eruptions dominate in the clinical tableau of tabes; and it should not be forgotten that the tabetic is usually neurasthenic as well; with a *cortége* of cerebral symptoms conjoined, which singularly aggravate the case; so that it is unreasonable to always assign all the phases of gastro-intestinal disturbances to the spinal lesion.

One of our patients refrained from walking, through the fear of falling, but does walk with the assistance of his little daughter, in whom he has more confidence than in his own legs. Another was persuaded that walking provoked those fugitive pains, and in consequence of the fear, immovably fixed his limbs for so long a time that they lost all power and wasted.

On page 20, of Prof. Leyden's work, we find a definition of his "Compensatory Treatment." He says: "Under this name, I mean a treatment which does not immediately attack the disease, but which develops his muscle force, and causes to disappear or diminish the motor ataxic troubles; for, by augmenting the forces of the enfeebled muscles, we markedly diminish the ataxic movements."

The French translator adds, that: "The purpose of this article is, to make known in France the invaluable method of 'Compensatory Treatment' as practiced by Dr. Frankel for *Tabes-Dorsalis*, which we have employed in two cases with signal success."

Frankel's Theory.—Frankel says that the ataxic is a man who must be taught anew, to govern the co-ordination of his voluntary muscles. The walk of an ataxic may be compared to a complicated exercise of a fat man who endeavors to execute it for the first time. For example, a man who tries the tight-rope act, for the first time in his life; certainly his movements are decidedly ataxic as compared with those of the professional. In mounting or descending stairs for the first time, our movements are always rather ataxic. In a word, co-ordinative movement is not innate with us; but we acquire it according to our needs. We may say that we are all born ataxic. Our first movements are guided by sight and by muscular sense. In more complicated movements, as in writing and playing on an instrument of music, we acquire control by long practice. With the adult, when he essays for the first time a new co-ordinative movement, the will, under the form of attention, plays an important rôle.

Returning to the ataxic: In the course of the destruction of the nerve fibers of conduction, he can no longer co-ordinate the movements of the contractile muscles without the aid of vision. He is perforce compelled *to see* the extent of muscular contraction and duration of movement.

Hence it is that the sense of sight, supplants, as it were, the muscular sense; although at no time is the destruction of nerve conduction complete, as observation has often proved. Temporary amelioration of the ataxia, we will sometimes notice, even in advanced cases. It may be spontaneous; or it may be under treatment; which demonstrates that a certain part of the nerve fibers remain, when muscle sense is intact. It may be that those fibers which remain can in time under favorable circumstances, compensate for those destroyed; as we may notice with a man who has lost an arm, by a species of apprenticeship the remaining untrained arm may acquire all the dexterity of the one lost. These examples of accommodation by functional adaption might be multiplied almost indefinitely. But we will now, after this, the preliminary review of functional adaption, consider the value of Dr. Frankel's treatment for the ataxia of the tabetic; as we believe that this treatment is of great utility in this condition.

The Principle of Dr. Frankel's Method consists in making the patient execute many complicated movements, with close attention on his part. These movements are executed only in the affected ataxic organs; but, what is most essential is, that the patient observes attentively the contractions of the muscles, and corrects their irregularity, which is the consequence of the ataxia. In ten cases reported by Dr. Frankel, these ataxic movements are limited to the upper extremities. With these, a most complicated series of new movements are instituted; as writing lines, circles, etc.; but it is unnecessary to describe these in full, except to say that they were varied and complex.

In principle, Dr. Frankel divides those movements into three categories.

1st. *Simple Muscular Contractions*; i. e. but one muscle, or one physiological set of muscles, as flexors, adductors, extensors, etc.

2nd. *Simple Co-ordinative Movements. e. g.* to recognize an object at a distance, touch the border of the nose with the index finger, carry the hand to the mouth, etc.

Compound Co-ordinative Movements. To carrry a full teaspoon to the mouth, etc.

In applying these principles to the lower extremities, we are naturally forced to utilize the motor functions of the limbs. We have treated by Dr. Frankel's mechanical method a series of tabetic patients, at the hospital Cochin in the service of our master, M. le Dr. Dujardin-Beaumetz, with two in the city; and we may here remark, that in all the cases so treated there was a marked amelioration; although we appreciate that in a hospital there are not always the facilities to deal with these cases that there are outside. With the two cases which we treated at their homes, the diagnosis was confirmed by MM. Charcot and Erb.

Treatment: Mechanical Technique. In each case a gymnastic seance of half an hour's duration, without counting the time for rest and muscular repose between the different exercises, and massage of the limbs. It is almost unnecessary to here speak of the great value of massage after violent, muscular exercise, which is known to every one. Besides, we have the testimony of the eminent Zabloudoiski who speaks with precise and conclusive force on this subject.

The sèance was begun by simple exercise:

1. The patient being in bed, with the limbs bare, we commenced at the feet, working simultaneously, with both flexion, extension, adduction and abduction.

2. Flexion of knees in the same manner: first, one knee, then the other, and again both simultaneously.

3. Flexion, extension, adduction and abduction of the thighs, in the same order as described above.

Each exercise is continued until the patient is able to control the muscular contractions. After a little, it will be noticed that the patient executes his movements with more regularity and exactitude.

We pass now to exercises more complicated, during which the patient must occupy the standing attitude. Can he walk unsupported, or with a cane only? We will have great difficulty at the outset to be able to assure our patient that he can stand unsupported, for *they all* are afraid of falling. This fear is really not justified, as it is but a pathophobia, partly mental, and partly in the muscular weak-

ness. In the beginning, at each exercise, the patient will invariably cry out, "It is too difficult ; I can never do it !" It is here that the moral influence must be exercised. We must teach him to outgrow this fear, and place confidence in his limbs.

Now, the exercises will commence in the order of their complexity; the simplest first, and the most complex next.

1. Sit you down, slowly, without that stick! Now raise up without it.

2. The patient stands, cane in hand, next, and raises his left leg, first completely clear of the floor, advancing it forward before the other. He returns the raised foot, and goes through the same evolution with the other.

3. Advance six paces forward with the cane. Advance slowly, and plant each foot squarely on the floor.

4. Stand without the cane, the limbs a little separated. In this position, gently let your body down on the flexed knees. Now, gently raise yourself.

5. As in the second exercise, the patient advances the left foot, then, after having drawn it back, advances the other. This is done four times.

6. March twenty paces, as in exercise No. 3.

7. Exercise without the cane.

8. Remain standing without the cane, the feet close together, hands on the haunches.

9. Remain standing without the cane, feet widely apart, and hands on the hips. Execute gymnastic movements with the hands meanwhile, backward, forward, up, down, etc.

10. Exercise No. 9, with the feet together.

11. Exercise No. 10, with the feet together.

12. Walk along a straight line, traced on a plank with chalk, using a cane.

13. Same exercise without a cane.

In this manner, we may schematically go through diverse exercises with any species of the tabetic. Occasionally the scheme may be modified; omitting this and adding that, according to the character of the ataxic troubles, the degree of development and the state of the muscles. We have, so far, given a description of the exercise which we have employed with our own cases; the mechanical therapy for ataxic movement, in *tabes dorsalis*. Below are the histories of two cases treated after this plan, outside of hospital.

Observation 1. Patient, age 48, banker, no neurotic heredity, never was sick in his life. Married at 28; has four healthy children, the youngest eight years. It is now twenty years since he first observed the premonitions of the present illness. Development of symptoms very slow. In the beginning, fugitive pains, and difficulty in urination, limbs easily fatigued.

It is now fifteen years since Charcot diagnosed the *symptoms of tabes*, and sent the patient to La Malon. But the symptoms of locomotor ataxia steadily advanced, although very slowly, until 1888. At this time, our patient had a cerebral hemorrhage, a right hemiplegia with temporary aphasia. After this attack the ataxic state of the limbs rapidly attained empire. The left limb before this was "good," became the seat of paræsthesias, shifting from one part to another. This ataxia indiscriminately attacked the upper as well as the lower extremities. Our patient, who was an excellent pianist, could now play nothing.

Oct. 25, 1891, we note as he comes to us, that he is a man of large, portly stature, well built. He has a slight ptosis of right eye-lid, complete immobility of both pupils; muscles of the face, tongue and larynx, in normal state.

Superior Members.—The muscles of the hands and arms are well developed and show no trace of paralysis ; although those muscles are decidedly ataxic, in all complicated movements, as in writing, playing an instrument and in all simple movements with the *eyes closed*. A feeling of fullness in tips of fingers, though tactile sense is normal.

Inferior Members.—The muscles of the right leg, particularly the gastrocnemii were soft and unresisting. The muscles of the left leg had distorted the foot into a talipes varus, although there was no paralysis of sensation present in the limb; and, by a powerful effort of the will, he could obliterate the deformity of the foot. Muscular force is conserved.

The cutaneous patella-reflexes are abolished in both sides. Tactile sensation in both legs. Muscular sensation

abolished in both sides. The patient, with both *eyes closed*, has no notion of the position or situation of either limb. Bladder, negative. Partial paralysis of the sphincter-ani. Genesic impotence. Patient cannot raise himself. To walk he employs a cane in one hand, and, with the other grasps any object within reach. So supported, he may make fifteen or twenty paces. In walking he throws his legs forward, as the feet are projected with force on the ground. In sitting, he tumbles into the chair in a heap, and, as his nates come down, his heels rise high in the air. For a considerable time he had given up all treatment.

Treatment.—Every morning a half hour's gymnastic sèance, followed by massage of the legs. Seeing the advanced stage of the disease, he was only put through the simple exercise. After twelve days, more complex movements were begun, during which time the patient had to make voluntary movements of the legs.

Now, after three months' treatment, he is able to raise and seat himself without support. He is able to make his way about his apartments with the aid of a cane, but, in the street, he must have the support of an arm. This treatment was continued all winter with but short intermission.

He has had in our absence the misfortune to fall and injure his knees, which now requires an orthopædic support. The result of treatment, however, has not been lost, for, with his apparel, he walks now much better than before the treatment. The other symptoms of *locomotor-ataxia* have not been in any way modified by the treatment.

Observation 2. Patient 42. Without any neurotic heredity. Since eleven years of age has had rheumatic pains in his articulations. In 1871 and 1872 fugitive pains in the legs. Fifteen years later they extended into the feet and knees, the latter becoming very weak and unsteady. At La Malon in the same year, 1887, patient became paraplegic. After a month, however, the patient was able to move the palsied limb. But, nevertheless, locomotion became very ataxic.

In 1890 he consulted M M. Charcot, Erb and Grasset. All diagnosed his condition: *tabes-dorsalis*.

Since 1891 patient had no treatment. From time to time he would be suspended. This would relieve somewhat the vesical symptoms and ease the pains in the legs.

In April, 1892, when he came under our treatment, his condition was as follows: He is a man of short stature, the skin is pale and slightly yellow. His general health is fair, appetite good, nothing abnormal about the eyes, their accommodation and refractions; nothing abnormal with the upper extremities, no sexual impotence; absence of Argyle Robinson's symptom (irregularity of the pupils).

The inferior extremities are greatly exerted. Both patellar reflexes wanting and the plantar reflexes are feeble.

Sensibility. Paræsthesia in the legs. Sense of touch is normal. *Muscular touch is completely abolished*, but muscular strength is quite intact, though not co-ordinative, and hence both feet are strongly adducted.

In March, Frankel's mechanical treatment was commenced. The result obtained we will leave to our patient to answer. He says: "Now, May 7, I am able to walk fifteen minutes without rest. I walk about my apartments without the aid of a cane. At night, when the pains set in the limbs, the warm bath gives me immediate relief. May 16, amelioration continues and my ability to walk is improving nicely. I can preserve unsupported my equilibrium in standing, and in the woods and fields the underbrush or irregularities of surface do not interfere with easy locomotion.

"*May* 21st. Pain in the right knee for half an hour. I walked nearly an hour this morning in the *Bois de Boulogne*. I was able to make the trip from the *Hotel* de Poste (Post-Office) to the Place des Victoires, at which latter place, I took a carriage. This is the first time that I have been able to walk in a crowd so far without fatigue.

"May 23. Was able to visit the barber and return alone (nearly 300 meters)."

The patient quit Paris toward the end of June. He returned to me early in August. Amelioration in the limbs has continued. His general health has improved, and his appearance is better. However, in spite of the remarkable

amelioration, the cardinal symptoms of *tabes* remain the same as before treatment. The symptom is as pronounced as ever, for his muscular insensibility has remained the same since the beginning, unchanged.

The conclusion which we came to with respect to Frankel's method is not based on these two cases only, as was stated in the beginning.

CONCLUSIONS.

1. The ataxic movements of the tabetic may be very notably relieved by Frankel's method.

2. Gymnastic exercise notably improves the nutrition and strength in the affected members.

3. Exercise, methodically conducted in the affected members, greatly adds to the co-ordinate force of the muscles.

4. By appealing to the moral element of our patient, he gains confidence and hope, which for the time dispel the oppressive despondency and mental anguish which so oppress these unfortunates.

5. This method is equally applicable in *all* cases of the *tabetic;* though we can obtain better results when the disease is not too far advanced.

6. The only ones in which it should be contra-indicated are in that class in which the disease is attended with a serious complication, or pursues an acute course.

NOTE: COMMENTS BY THE TRANSLATOR.

I have taken pains in the preceding article to give the full text of the original, with such italicizing of words and paragraphs as are employed by the French *savant* and no others.

The article struck me as a peculiarly valuable one; as not only giving in detail the technique of Frankel's valuable method in this very obscure and painful malady, the pathology of which is yet anything but definite and satisfactory. Besides, because the author enunciates a great and grand principle, which is the key-stone to the arch of all logical therapeutics; viz "that though our patient may be a sufferer from a malady on which the most potent remedies known to art make no impression, yet by the application of that principle so graphically laid down by the author, we may, notwithstanding all this, secure to our patient, by mental quiet, inspiring hope and a local therapy, much relief; give to the most hopeless, physical comfort; carry them out of themselves, as it were, until the spirit quietly ceases to tenant their now wrecked corporeal abode. Let us, then, not blindly pin our treatment on any of those changing pathological doctrines, which are as unstable as the ever shifting sands of the ocean; but, *when occasion arises, let the disease take care of itself and treat the symptoms.* If then our patient have a lesion beyond the reach of the surgeon's scalpel, or inappropriate for its use or for internal medication, no matter what its basic origin may be, whether tubercle, cancer, typhlitis, or anything else, let us watch for those phenomena which impress the sensorium, the moral man, and give rise to serious nutritive changes, and address our keenest observation with our most serious thoughts to solve these indications. In this way many poor, doomed unfortunates, by a proper therapy addressed to *signs* and not *assumed* pathological changes, may be given years of fair health, and that mental rest the *sine qua non*, to corporeal integrity and all human happiness.

My own experience with a considerable number of cases of spinal injuries in which either paralytic or ataxic symptoms have followed, either separately or conjointly, in my hospital service, has long since assured me that unless the medullary substance is *totally* destroyed, regardless of the age of our patient or his general condition, by an address to the psychical side, an intelligent, judicious medication, with patient, systematic gymnastic exercise, we may often work apparent wonders in many of what have been cast aside, as hopeless incurables. It is true, we cannot give one man a new set of vertebræ, or mechanically reach and gouge away an old inflammatory exudate; but, nevertheless, some one or more of the many multiform functions of the cord can be reached by a complex therapy; and often a bed-ridden patient may be put on his legs again and made a useful member of society.

T. H. M.

302 West 53d St.

NEURALGIA.—ITS ELECTRICAL TREATMENT.

By W. H. WALLING, M. D.

IN the treatment of this ailment we should be careful to differentiate affections of the brain and spinal cord, rheumatism, neuritis, pleurisy, etc., from true neuralgia.

NEURALGIA of the fifth pair of nerves is, perhaps, the most commonly met with. The prominently painful spots, (Valleix's points) when this pair is involved, will be found as follows:

IN THE OPHTHALMIC DIVISION, at the supra-orbital foramen; on the upper eyelid; at the line of union of the nasal bone with the cartilage at the inner angle of the orbit and in the eye-ball itself. Still another is situated near the parietal eminence, where, at times, the pain is as violently persistent as at any other point.

In the SUPERIOR MAXILLARY DIVISION the painful points are in the infra orbital nerve at its foramen; a point over the most prominent part of the malar bone; an uncertain point on the gums of the upper jaw; a similar point on the upper lip, and another on the palate.

ON THE INFERIOR MAXILLARY DIVISION.—The painful points will be found on the auriculo-temporal branch, just in front of the ear; another on the inferior dental nerve, where it emerges through the mental foramen.

TREATMENT.—If the pain is relieved by pressure, the current from a fine secondary faradic coil, with a rapid vibration and a peculiar *tone*, will generally give relief in a short time. The electrodes should be at least one to one and a half inches in diameter. Place the anode over the painful spot, and the cathode at the back of the neck, or in the hand of the patient, and begin with a very mild force, just sufficient to be perceptible to the sensitive nerve, and gradually increase it up to a point just short of actual pain. A rheostat should be used in making these applications. Keep the current at this stage without change, until complete sedation follows. When sensation is abolished, gently turn off the current, and await reaction. If the paroxysm returns, repeat the operation, even if it be every half hour, until the attack be overcome. (The hand of the operator also makes a most excellent electrode). I generally use, however, the galvanic current to the painful spots as follows: Switch into circuit from five to ten cells (a rheostat is always used); place the cathode as before, and apply the anode, which may be one inch or less in diameter, to the painful point with a current intensity of from one-half to one ma. for from three to ten minutes, as may be necessary. Upon the anode may be used cocaine, aconitine, morphine, atropine, and some other medicinal substances, being careful not to get the drugs into the eyes.

[NOTE.—About two hours after using aconitine amorphous, $\frac{1}{250}$ grain, (two dosimetric granules) upon a patient's forehead (supra-orbital) for pain, a free perspiration was noted at the point of application, which continued for some time. The local effect of the aconitine continued for about six hours, in this case, although probably not more than one-half of the amount used, was carried into the tissues.]

If the lesion causing the pain, be central, or deeply seated, good results may not follow cataphoresis. This is diagnostic.

IN CERVICO-OCCIPITAL NEURALGIA.—The same line of treatment may be pursued.

CERVICO-BRACHIAL NEURALGIA.—Place the cathode in the hand of the affected side, and with the anode follow the line of the nerves, dwelling upon the painful points. In chronic cases I use electro-massage (faradic) with the cathode. In all cases, acute or chronic, spinal and central galvanization or faradization or both, should be given as well.

DORSO-INTERCOSTAL NEURALGIA.—Seat the patient upon a wet sponge attached to the cathode (faradic), if the case be of recent origin, and go over the whole back and around the sides with the anode, using a mild cathodal force. Or, a large pad may be placed over the stomach, and the same treatment given. I frequently commence with the galvanic current and close with the faradic. For a chronic case, I use electro-massage (faradic), with as strong a force as the patient can comfortably bear. Sometimes the static spark takes the place of electro-massage, and with great ben-

efit. For use about the head, the breeze, from a wooden point, is applied.

SCIATICA, although seldom a true neuralgia, may, in its later stages be treated as such by the static spark. Such treatment should not be given as long as neuritis is a factor in the case. Locate the tender points by means of the faradic cathode, and give treatment with the galvanic anode over the whole course of the nerve, with the cathode at the sole of the foot. Cocaine hydrochlorate, or morphine sulphate may be used upon the anode, in acute conditions, that is, when neuritis is a factor, and aconitine, and especially chloroform, in the same way, when all inflammatory action has subsided. In some cases, the writer has overcome the disorder at one sitting, by using chloroform rather freely, on the anode, applied directly over the most painful point.

Treatment should be given, however, as often as necessary to control the pain. A current intensity of from ten to twenty milliamperes will in most cases be well borne, if not continued too long at a time. In making cataphoric applications, a diffusion electrode is preferable. My own is made of carbon, thoroughly saturated with hot paraffine, and insulated with hard rubber. Several sizes are useful for different localities.

Idiosyncrasy as to morphine and some other drugs, must be taken into account in making strong applications. Commence with small doses, one-fourth to one-half grain, and increase as desired. I have never had any unpleasant effect from using any drug, with the exception of morphine.

A low voltage is essential in all these applications. I use only sufficient force to carry the amperage necessary for the work in hand, and no more. The use of the electric light in the treatment of neuralgia and other ailments will be considered in a future paper.

1606 GREEN ST., PHILA., PA.

The Medical Age records a case of intussusception cured by carbonic acid gas inflation. About six gallons of gas were injected. The description of the case, however, points to fecal impaction rather than intussusception.

News.

The staff of the Buffalo City Hospital has resigned, *en masse*, as a protest against the management.

There was a little bit of venom manifested in the action of the hospital, that sent a diphtheria case directly to the office of the Board of Health, instead of to the Municipal Hospital.

Director Windrim addressed the Woman's Health Protective Association May 4. We were not present, and cannot tell whether tight lacing, trailing skirts, or thin-soled shoes, formed the subject of discourse.

Dr. A. Vanderveer, of Albany, has been nominated to fill a vacancy on the N. Y. Board of Regents. It is thought that the Democrats will acquiesce in the selection, and give Dr. Vanderveer the compliment of a unanimous choice.

We rarely go out of our way to speak of financial affairs ; but rise to remark at this time that we know of many physicians who have made small fortunes, by keeping out of the stock market, and by disowning Reading and all its works.

Judge Reed has decided that a drover who sells to a butcher an animal affected with actinomycosis, admittedly and visibly, is amenable to the law of 1860. This law renders the exposure for sale of the flesh of any diseased animal, or any other unwholesome flesh, "knowing the same to be diseased or unwholesome," a misdemeanor.

THIOL IN SKIN DISEASES.—McLaughlin (*Notes on New Remedies*) reports favorably on thiol in the treatment of eczema of several varieties, acne, zoster, herpes, rosacea, ichthyosis, furuncle and carbuncle. He applied in lanoline ointment, one to eight; in zoster, a watery solution, one to four, was painted on twice a day, and the vessels covered with absorbent cotton. The distressing symptoms soon subsided.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

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SANITARY INSPECTION.

ANOTHER inspection of the slums district is in progress. This is quite entertaining and furnishes the newspapers a number of interesting items. It also gives the inspectors something to do. To the inhabitants it has ceased to be an enlivening episode and by frequent repetition has come to be considered a nuisance. If anything came of it, the case would be different, but people get tired of inspections that end in nothing. Time after time last summer this district was overhauled by the police, the sanitary inspectors and the medical inspectors. Each time the same nuisances were reported, overflowing cess-pools, wells leaking into cellars, alleys, yards and cellars reeking with filth, garbage and ashes uncollected, vacant lots piled six feet deep with rubbish, etc., etc. Each time the guilty parties were notified and each time they ignored the notices.

"The pikes went on stealing,
The eels went on eeling,
Much edified were they,
But preferred the old way."

As an illustration of the practical utility of the repeated inspections of last summer, we are told that the present overhauling has detected *one thousand nuisances in four thousand houses inspected!* Comparison with last year's reports would show that these are the same old nuisances. The only remedy in the present state of affairs lies in the formation of block sanitary associations, where intelligent citizens take the matter into their own hands, in the good old American style, instead of waiting for officials to reel out red tape.

THE ST. AGNES' HOSPITAL IMBROGLIO.

THE following letter explains itself:

PHILADELPHIA, May 3, 1893.

WILLIAM V. KEATING, M. D.,
Medical Director, St. Agnes' Hospital.

Dear Sir: We the undersigned members of the faculty of the Jefferson Medical College, beg to call your attention to what we feel is a well grounded grievance. In the rules governing the appointment of the medical staff of St. Agnes' Hospital signed by you as medical director it is provided as follows:

"I. There shall be four resident physicians elected annually by competitive examination.

"II. These shall be graduates of a creditable medical college in good standing and shall present a certificate of good moral standing from a regular practicing physician."

The position of resident physician in St. Agnes' Hospital has been so highly esteemed that our students, at a cost in time, labor and mental anxiety, have carefully prepared themselves for the competitive examination. It has come to our knowledge that these are openly violated. Drs. Rhoads, Birriolo and Bowman, graduates of Jefferson Medical College, presented their applications and certificates of moral standing. Dr. Rhoads was indorsed by Dr. H. A. Hare, a member of the medical staff of St. Agnes' Hospital; Dr. Birriolo was indorsed by Dr. Crandall, of Tioga County, Pa., and Dr. Bowman by Dr. A. F. Kempton, of Philadelphia.

Out of thirty-five applicants from various schools the results obtained by your own Examining Board: Dr. Rhoads, of

the Jefferson, was first on the list; Dr. Newcomet, of the University of Pennsylvania, was second; Dr. Birriolo, of Jefferson, was third; and Dr. Bowman, of Jefferson, was fourth. These three graduates of Jefferson having complied with all your requirements, were entitled to the first, third and fourth places out of the four appointments made. But as medical director you have set them aside and given the appointments to others. If the rules for competitive examination of St. Agnes' are rules, we say they should be fairly and justly carried out, which we claim has not been done in this instance, and we urge that you do justice to the men that stand at the head of the list by revoking the appointment of those elected; who stood twelve, sixteen and nineteen out of a list of thirty-five.

Very respectfully yours, H. C. Chapman, John H. Brinton, Theophilus Parvin, James W. Holland, William S. Forbes, William W. Keen, Morris Longstreth, H. A. Hare, James C. Wilson, E. E. Montgomery.

The grading was based on a possible fifty and the following was the result of examination as given by the Board of Examiners:—

Rhoads, Jeff.	49	Hubbard, Jeff.	44
Newcomet, Univ.	48	Baltodino, Univ.	44
Birriolo, Jeff	48	Kelly, Univ.	44
Bowman, Jeff.	48	Gaylord, Univ	44
Kunzig, Univ.	48	O'Drain, Univ.	43
Vandevoort, Univ.	47	Borsch, Jeff.	42
Fix, Jeff.	47	Hord, Univ.	42
McDonald, Toronto.	47	Hamilton, Univ.	42
Smith, P J, Jeff.	47	Fulton, Univ	41
Henry, Univ.	47	Tinker, Jeff.	40
Moon, Univ.	46	Hobensac, Univ.	39
Rice, Univ.	46	Wetherill, Univ.	39
Sedgewick, Jeff	46	Bunce, Univ.	39
Page, Univ.	15	McAndrew, Univ.	35
Pyle, Univ.	45	Wright, Univ.	35
O'Malley, Washington.	45	Summer, Jeff.	30
Edgeton, Univ.	45	Farrell, Jeff.	30
Keusen, Jeff.	44		

Drs. Newcomet, Rice, O'Malley and Hubbard were appointed.

In his reply, Dr. Keating states that the certificates of moral character are accorded great weight in the selection of residents. Dr. Hubbard was appointed on Dr. J. M. Da Costa's recommendation; while the other successful candidates had only the good word of instructors or unknown preceptors.

This, however, could hardly apply to Dr. Rhoads, who was recommended by Professor Hare, and in whose behalf, we are informed, two of the examiners, also members of the hospital staff, personally visited Dr. Keating. The query naturally arises, if these three gentlemen are not credible witnesses to the moral standing of a candidate, how do they themselves come to be on the hospital staff? Dr. Keating's explanation simply means that the so-called competitive examination is a farce; and that the appointments are made on the basis of influence, pure and simple. Still, in the list of alleged triumphs in "competitive examinations," the St. Agnes Hospital appointments figure, year after year.

If the hospital alone were concerned, and its patrons were content to be served by inferior men, no comment would be necessary. But the effect of such a lesson on these young men should be considered. After proving their superiority in a hard-fought contest, the reward of their labor is bestowed on their defeated competitors; who have taken pains to secure "influence." "Influence is what counts! What's the use of working? You may work, but I'll play; for is not Mulhooley my friend, and he has a pull!" That is the lesson Dr. Keating impresses on these young men, at the outset of their professional career; when the mind is most impressible and may by such an injustice receive a lasting bias for evil. Under the circumstances, we would urge on the St. Agnes authorities the advisability of abolishing the pretense of a competitive examination, and leaving Dr. Keating to enjoy "the right of selecting whom he pleases," unhampered by any considerations of professional fitness. As it is, every candidate who has not been appointed is stigmatized as morally unfit, in spite of the Director's honeyed words; and every one who has endorsed the character of these young men can justly hold the action as a personal insult.

Annotations.

ON THE ACTION OF THE ORGANIC LIQUIDS.

SUCH is the title of an essay, delivered by an honorable and distinguished French physician, at a meeting of the Society of Practising Physicians and Surgeons, Paris. The *Medicine-Contemporaine* says: "It marks the beginning of a reaction against the quasi endorsement in favor of the organic juices," by those who have not hesitated to question the accuracy of statistics on this subject.

At the same meeting Dujardin-Beaumetz spoke in strong approval of Dr. Bardet's position with reference to the question of "organic liquids," but said nothing regarding that of "statistics."

M. Bardet said that: "In calculating the results following the injections of these liquids, the majority of authors invoked statistics. The appeal to clinical statistics is the habitual practice of the famous *post hoc ergo propter hoc*. Besides, the *clientele* of the testicular juice were recruited from an impressionable public, the neurasthenic, the hypochondriacal and worse. Hence experiments on them must be made with great caution. It is not a long time since I had one of these unfortunate subjects, on whom one of our distinguished *confrères* had practised the injection of sheep's brain. At first ameliorated, the poor devil soon discovered that the treatment made him much worse. 'Since,' said he, 'I began to subsist on brains of the sheep, the phenomena of excitation have become greatly aggravated, my sleep has gone, and I suffer incessant pain in my feet."

According to Dujardin-Beaumetz, suggestion plays a grand rôle with this method, that has been said to cure such trifling maladies as tabes, cholera, cancer of the stomach and diabetes! This is untrue, and Dr. Charcot denies that a single case, in his practice, has been cured or benefited by it. How can it be otherwise, when we know that these maladies arise from organic disease? What is lost, is lost, and all the organic liquids in the world cannot restore it. The truth is, that these organic liquids are, in general, tonic; and when we admit that, we admit all that can be admitted.

This strikes us as a most timely communication, now, since Brown-Sèquard would have us give countenance to one of the baldest pieces of quackery the world ever saw. This eminent *savant* knows, or ought to know, that the biological elements of the lower animal will not mingle, assimilate, and proliferate with those of man, or with any other species different from their own. He should know, too, as he taught for years, that *all* animal substances must first be reduced to proximate elements, of different chemical qualities, by a process of digestion before they can be assimilated by the economy. This "organic fluid" fad has caused incalculable damage to legitimate medicine, as it is absolutely devoid of scientific basis; and if it were sound, true doctrine, it would mean that all scientific medicine, since the days of Galen, and of Harvey, was nought else than a monstrous imposition.

T. H. M.

SEX AND CRIME.

LOMBROSO, from a study of several thousand female criminals, traces the genesis of criminality in the sex, showing that the tendency towards crime develops *pari passu* with the deteriorating physico-mental organism. He analyzes the normal woman, and explains why she is at once merciful and unfeeling, and why she is in sexual passion less pronounced than man. The variation is less than among men. Atavism, especially in criminal matters, is more likely than in man. Deterioration once started proceeds more rapidly in women, while in the woman who is a born criminal there may accumulate ferocities of a more pronounced type than in the congenitally criminal man.—*Lancet.*

DR. P. D. KEYSER has resigned the chair of ophthalmology at the Medico-Chirurgical College, that he has held for the past ten years; during nine of which he has also been Dean of the Faculty. Dr. Keyser has been an earnest advocate of higher medical education; and as such largely instrumental in establishing the present high grade of instruction at this college.

An active canvass for the vacant chair has commenced.

THE third annual conference of State Medical and Licensing Boards will be held in Milwaukee, June 7, at the Pfister Hotel The evolution of these Boards, their influence, composition and appointment, duties, and relations are to be considered. This is one of the most important meetings of the year. If the deliberations of this conference result in an agreement on the essential features, so that uniform legislation can be proposed all over the country, the cause would be greatly advanced. Indeed, the want of such uniformity has been the greatest obstacle to the formation of State Boards.

DR. ADOLPH MEYER, of our staff, has just been appointed, by Governor Altgeld, as Pathologist to the Illinois Central Asylum for the Insane, at Kankakee. It must be difficult to sustain an outcry against "political appointments," when such men as Senn, Clevenger and Meyer are chosen. We would be glad to see evidences of equal good judgment here in Philadelphia, where appointments are parcelled out among a ring of local politicians.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,
TIMES AND REGISTER,
1725 ARCH STREET, - Philadelphia, Pa.

LOCALIZED "BACK-ACHE."

MY patient is a lady about thirty years old, who had one child three years ago. Her general health is just fair. The help I want is for a severe pain just posterior to the inferior angle of the scapula.

She is troubled with leucorrhea at times, also with constipation to some extent. She is a small woman, not at all fleshy, but rather spare.

T. B. CABLE, M. D.

PEMBERTON, OHIO.

[The pain may be either myalgia, spinal curvature, neuralgia, gastric, or reflex from the uterus or rectum. Myalgia may be selected by applying the negative pole of a faradic battery to the muscles in succession; and cured by rest, inunctions of hot oil, and a daily mild positive current. Spinal curvature can be diagnosed by examination. Neuralgia is limited to the course of a nerve. Gastric pain will be accompanied by other gastric symptoms. An examination of the uterus and rectum will show if the cause lies there. The probability is that she has a tight anal sphincter that should be stretched (under ether), or else myalgia; probably from lugging that three-year old child.—ED. T. & R.]

INSOMNIA.

WILL you kindly help me out in this case? A woman, aged about fifty-five to sixty years, weighing about 130 pounds, rather pale, has had gastric and intestinal indigestion. Hydrochloric acid and regular diet greatly improved her, but she still has occasional pains in the abdomen. Her main complaint is of insomnia. Sometimes she cannot get to sleep until midnight; and as soon as she drops off to sleep, she wakes suddenly. She has startings in her sleep; the extremities jerk; and she has peculiar sensations pass to the top of her head or her finger-tips. Now, I know you will say: "Examine her heart, her kidney, and all the other organs, and find the cause of her insomnia." I cannot get an opportunity to do this. She has been given potassium bromide by another physician, and I tried chloral, cannabis indica and nux vomica, without results. I thought I would try tetronal or hyoscine. She has suffered from insomnia for ten years.

J. M. WHITE, M. D.

SHUQUALAK, MISS.

[Try a bowl of hot milk or clam-juice, at bedtime, with a little capsicum in it. If this does not succeed, sulphonal, fifteen grains. See that the bowels are freely opened; a hot enema answers well. Nux vomica, if arteries are sound; iodine for atheroma; atropine for doubtful cases, to be given during the day.—ED. T. & R.]

QUERIES.

I HAVE a case of fracture of the shoulder, and there are symptoms of paralysis: a sleepy feeling, as she calls it, in both legs. This was on the opposite side at first, but in both legs at this time. I am using strychnine and liniments with atropine. What shall I do in the case?

There is a company in Chicago, the the Doctors' Mutual Manufacturing Co. Is it a reliable company?

In a case of ulceration of uterus, what do you use as an injection?

Where is the best place for one to go to learn surgery, or see the most operations?

What do you use in operations on the eye? Cocaine? How many grains to the ounce?

Z. R. MILLARD, M.D.

THACKERY, ILL.

[The paresis is probably hysterical. Treat by the faradic brush, with solid stick of nitrate of silver to the spine, and full doses of valerian. We cannot tell what the shoulder requires, or if there is any local affection acting as an excitant of the hysteria. This requires the thorough examination that every similar case should have, before settling on treatment.

The company alluded to has good names attached, and we believe it to be reliable. Apart from ethical considerations, we think doctors had better not be concerned in the manufacture of their supplies.

Uterine ulcer is rarely seen, unless venereal. Wash out the vagina thoroughly with antiseptics, kresin, permanganate, or chlorinated soda; and then apply aristol to the ulcer.

For surgical instruction, apply to the Medico-Chirurgical College of Philadelphia, where Pancoast, Laplace, Garrettson, and Ashton, hold excellent clinics; while the hospitals of Philadelphia embrace on their staffs enough skillful surgeons to supply the whole United States.

For eye operations, cocaine is still the favorite: twenty grains to the ounce.—ED. T. & R.]

PALATAL ULCERS.

AGAIN I avail myself of the benefit of our "Bureau of Information," by requesting treatment for the following case:

A man, *aet* 30, with no syphilitic history, about a year ago had small ulcers of the uvula, pillars of the fauces and the pharynx; which have gradually spread into the posterior nares and auteriorly over the roof of the mouth. One large ulcer upon the latter place is almost deep enough to break through into the nasal cavity. There are now two large ulcers, each as large as a pea, on the posterior wall of the pharynx. Hearing and smell are affected, and there is painful deglution; but no pain otherwise. The edges of the ulcer are not very red, and are a little swollen; but they do not look like syphilitic sores. The surface is freely covered with pus. There is positively no phthisis. Breathing through the nares is moderately impeded, and the voice is a little husky.

Please suggest diagnosis, treatment and prognosis.

J. K. LEGARE, M. D.,

FORKLAND, ALA.

[Such ulcers are almost certainly tubercular or syphilitic. Wash out the mouth very frequently with peroxide, dry the ulcers and apply iodoform or aristol. Improve the man's nutrition by rich food, wine, iron, quinine and cod-liver oil, in generous doses. Astringent and stimulating lotions should follow, such as sage tea with tincture of iron. Do not give mercury unless a diagnosis of syphilis can be made out.—ED. T. & R.]

DEATH FROM CEREBRAL CONGESTION.

I WISH to report a case which I lost a few days since, through what I now consider to have been an error of omission. A girl of seven, whom I had never before seen, though apparently perfectly healthy in the morning, began to complain of headache at twelve o'clock, and at one went suddenly into convulsions. I was called about 3 P. M. to see her. At that time she was lying quietly, but unconscious; pupils normal. Before I left she twitched and jerked several times, but made no violent convulsive movements. Her pulse was full, rapid and bounding, head hot. Thinking it was a congestion of the head due primarily to digestive disturbance, I left gr. $\frac{1}{10}$ calomel to be dropped on the tongue every half hour, and a mixture of tinctures aconite and belladonna to be given every fifteen minutes for the purpose of equalizing the circulation. I also told them to give her feet and legs a hot bath. At 7 P. M., the mother came to my office telling me that the child was conscious and had asked to be let alone. It seems, however, that this return to consciousness was only for some ten minutes, as she again relapsed into unconsciousness, had several convulsions, and died at one in the morning. With the greatest amount of difficulty I succeeded in gaining permission to examine the child's brain, in order to make certain whether my diagnosis of death from cerebral congestion was correct, but they would not permit examining the rest of the organs. I found, however, as I had supposed, evidences of a violent acute congestion, the blood vessels engorged to their fullest extent. My first error was in not going back to see a child so dangerously ill that evening, no matter what the mother said about return to consciousness; the second one was, I think, in not bleeding. In a child of that age, who went into

convulsions so suddenly and remained unconscious for so long a time, I believe I did wrong to rely on the comparatively slow action of medicines, and that if I had drawn blood could probably have saved its life.

EARNEST B. SANGREE, M. D.,
744 SOUTH FIFTEENTH STREET.

Book Notes.

THE CREATION OF GOD. By Dr. Jacob Hartman. New York: The Truth Seeker Company, 1893. Cloth, 8 vo., pp. 432.

This work consists of furious diatribes against Judaism and Christianity, Rabbins and Priests, Prophets and Apostles —and the Bible. Strange to say neither Edda, Veda, Avesta, Koran, nor Book of Mormon are thought of in connection with superstition. It seems also that the one-god dogma is just as obnoxious to the author as is that of the Trinity. In this he has made a great advance over Tyndall, Huxley and other obsolete scientists, who have subscribed themselves "agnostic;" for our doctor knows that there is no God.

The few chapters devoted to the physical sciences are all right, but outside of that the book is jejune and subjective to the last degree. In the domain of history, of culture and of archœology, the few facts given are mistaken ones, and of their many and great discoveries this treatise is oblivious. The location of the rivers Gihon and Pison on his chart is, in view of the discoveries of Wetzstein and Sayce, simply amusing. Of this book, as of the ever-increasing annual deluge of pseudo-scientific works since the days of Higgins, Bryant, Faber, *et al.*, one can repeat the remark, attributed to Abraham Lincoln, that: "For those who like this sort of thing, it is the very sort of thing they like."

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX, 1893. Eleventh year. New York. E. B. Treat. Pages, 626. Price, $2.75.

It is a trite remark to make of a book nowadays to say that "no physician can afford to be without it," but if true of any work it is certainly true of this annual. It is impossible for any one to charge his mind with the multitude of new and good suggestions and discoveries appearing in the world's medical journals each year, but by means of the present work the necessity for such an attempt is spared him.

Here is gathered up in a concise and readable form by men of well-known merit in their particular lines, whatever of advance has appeared during the year, and the owner can at a glance command all the literature that has come out on any particular subject. As an additional convenience and saver of time, a synopsis of the new treatment of the 1892 volume is appended to each article in the edition of 1893. The work, however, is not a mere compilation of matter that has already been printed, a large number of new monographs are incorporated. Some of these are, comparatively speaking, quite full, and two, those of aero-urethroscopy and laryngoscopy, are illustrated with excellent colored lithographs. In the first part of the book fifty-eight pages under the editorship of Prof. Hobart Hare, are devoted to new remedies; then follows the main body of the work on new treatment. At the close are chapters devoted to sanitary science, progress in pharmacy, and one on new inventions. The whole concludes with a list of medical books, mainly American, issued during the past year, and a complete and satisfactory index.

News and Miscellany.

TWELFTH ANNUAL COMMENCEMENT OF THE MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.

The annual meeting of the Alumni Association was held in the College May 3d, and was presided over by Dr. William H. Pancoast. The graduating class, forty-six in number, was in attendance, and, after their names had been read by the Secretary, W. B. Stewart, Zane B. Taylor, on behalf of the graduates, made a short address. Appropriate remarks congratulating the graduates were then made by Dr. Pancoast.

The following are the names of the graduates :—

Albright, Jacob D.; Beck, Charles E.; Beck George F.; Bowers, Charles E.; Brubaker, Benjamin F.; Campbell, William J.; Dilts, Harry C.;

Edmondson, J. J.; Falls, Samuel C.; Fry, W. W.; Graf, A. F.; Gray, John M.; Gregg, Charles E.; Hunter, John R. W.; McKeage, Robert B.; McKelvey, William W.; Miley, Harry M.; Morris, Spencer, M. D.; O'Reilly, Thomas B.; Pancoast, William H., A. M., M. D.; Shields, William H.; Shindle, William L.; Shoemaker, J. Frederick; Shoemaker, John V., A. M., M. D., Pennsylvania; Taylor, Zane B; Thompson, Edwin Gilpin, Nova Scotia; Walter, Mitchel; Webb, R. Davis; Welch, John C.; White, Thomas D., of Pennsylvania; Thomas L. F. Armitage, of Ireland; Charley K. Burt, C. Lincoln Furbush, Howard S. Kinne, of New York; George H. Crabtree, of Maine; Andrew H. Harris, of North Carolina; Julius D. Love, Daniel A. Modell, S. Seilkovitch, George A. Freeman, of Russia; John McNichol, of Canada; Morris E. Michel, William H. Pratt, Clinton H. Read, of New Jersey; Thomas W. Moore, of Kentucky; Edwin Gilpin Thompson, of Nova Scotia.

The following officers of the association were elected: President, William H. Pancoast; Vice-Presidents, Thomas B. Earley, I. M. Koch, M. F. Gates, A. J. Maher, J. C. McCartney, Henry Fisher, H O. Starkey, W. X. Sudduth, Albert Kolb, P. Appleman, W. J. Campbell; Secretary, W. Blair Stewart; Treasurer, E. S Gans. The executive Committee is as follows: Chairman, J. V. Shoemaker; Messrs. Sangree, Levy, Krug, Cramp, Embery, Eagan, Gubbins, Cleaver, Hovnanian, Ramsey, Watson, Falls, O'Reilly, Pratt, Furbush, Taylor, Cassidy, Boenning, Croskey, Woodbury, Dickinson, Hoopes, and Anders.

The annual address was delivered in the College Building by General Daniel Hastings. About 150 were in attendance at the banquet tendered to the General at the Builder's Exchange after the meeting. Addresses were made by Col. McClure, General Hastings, Very Rev. J. F. Laughlin, Mr. D. T. Pratt, Profs. Pancoast, Laplace, Stewart, Montgomery, C. K. Mills, Waugh, Haehnlen, Ashton and others. The banquet was an elegant affair, and great enthusiasm was displayed.

The twelfth annual commencement was held at noon May 4, at Chestnut Street Opera House. The auditorium was comfortably filled by a large number of the friends of the graduates.

Hassler's Orchestra gave selections from Milloecker, Long, Sullivan and Waldteufel. After the rendition of Froehligh's entree march "Amazonen", the Very Rev. James F. Laughlin, D. D., Chancellor of the Diocese, offered a prayer, and then Prof. William H. Pancoast, A. M., M. D., President of the College, conferred the degree of M. D. on forty-six graduates. The address to the graduates was delivered by Professor Ernest Laplace, A. M., M. D., Professor of Surgery, Pathology, and Clinical Surgery, who took for his subject "The Physician of To-day," in which he said, among other things :—

"Youth is apt to yearn for opportunity to do the deeds that give men fame, and to mourn that in this utilitarian age there are no longer ferocious giants or fiery dragons or other monsters to destroy; no longer unfortunate knights or beautiful maidens to rescue from captivity and death, no longer an opportunity to do heroic deeds. I would impress you, on the contrary, that this world of suffering and sin is still full of great opportunities; full of monsters as the hydra with two heads sprouting for every one severed; full of the innocent and helpless, who can be rescued from captivity and death Neither Hercules nor King Arthur, neither Richard of the Lion Heart, nor Bayard without fear and without reproach, had more opportunities than you have to do great deeds. The worst monsters that ever ravaged mankind still capture and devour us, although these monsters can be vanquished. The familiar names of some of them are consumption, diphtheria, scarlet, typhoid and yellow fever, cholera, drunkenness.

"To wage war against these monsters your Faculty has girded on your armor, has signed your commissions as leaders of the people against mankind's most destructive foes—dirt, drunkenness, and disease. Teach the people that science has conclusively proved that sickness and death from catching diseases are very surely not due to the will of a pitiless God, but surely to man's fatal ignorance and negligence of the laws of Nature's God. Instead of saying with reference to disease, 'The Lord gave and the Lord has taken away; blessed be the name of the Lord,' rather let it be, as we now see the truth, 'The Lord gave, man's criminal ignorance has taken away; cursed be the name of ignorance.' Teach the people that while the Pagans who made ancient Rome mistress of the world established that the health of the people is the supreme law, we of boasted modern progress neither appreciate nor execute that law. Enlighten the people so that the interest of the government will be directed towards furnishing such appropriations as will give the quickest development to that science capable of such good to the nation.

"Teach the people that medical institutions are the fountain heads whence the science of hygiene, like pious incense, spreads over the world the message of health, wealth, and happiness. Out of these grow the flowers of love and good-will to men, by which charities are founded, hospitals endowed, laboratories established for the further pursuance of those studies whose practical application is the raising of the human kind to a higher plane—higher civilization, nobler aspirations—giving an earlier foretaste of 'the day when man will have developed into that crowning race which, eye to eye, shall look on knowledge, under whose command is Earth and Earth's, and in their hands is Nature like an open book, and all we are is but seed of what in them is flower and fruit.'"

In conclusion he said:

"Therefore, gentlemen, to reach this ideal, which I know is not all a dream, we would see you with our alumni bound by a brotherly friendship; we would see you take rank, and study to learn, study to succeed, study to acquire vaster stores of knowledge; and while the Faculty extends to you a parting hand, I read in your hearts the silent, but firm, resolve to be devoted to the best interests and progress of your chosen profession, and to reflect honor upon your Alma Mater.

"It only remains for me, gentlemen, to bid you God speed in your entrance into professional life, and, with the best wishes of my heart, say a final

"Farewell! A word that hath been and must be
A sound that makes us linger, yet—farewell!"

The prizes were then awarded as follows:

The Faculty gold medal, to Andrew H. Harris.

The Anatomy gold medal, to Charles Lincoln Furbush.

The Morris prize, $50 in gold, to J. Frederick Shoemaker and W. H. Shields.

The Faculty, prize of the Junior Class, to J. G. Hercelroth, of Pennsylvania.

The Freshman prize, a gold medal, to J. F. Downing of Pennsylvania.

The prize in Obstetrics was awarded to Geo. H. Crabtree; who also won a case of pocket instruments for the best report of Prof. Pancoast's clinics.

JEFFERSON MEDICAL COLLEGE.

Jefferson Medical College held her 68th commencement exercises May 2d, at the Academy of Music. The graduates numbered 188.

After the conferring of the degress the Dean of the Faculty made the award of prizes, as follows:

1. A gold medal for the best essay on a subject pertaining to surgery, to Henry J. Sommer, Jr., of Pennsylvania, with a certificate of honorable mention for the essay of Soren Sorenson, of Wisconsin.

2. A gold medal for the best essay on a subject pertaining to obstetrics to Warren A. B. Knapp, of Pennsylvania, with a certificate of honorable mention for the essay of William George Ramsey, of Pennsylvania.

3. A gold medal for the best anatomical preparation, to William White McKenzie, of North Carolina, with a certificate of honorable mention for the preparation of Benjamin Matthias Bartilson, of Pennsylvania.

4. A gold medal for the best examination in therapeutics, to Andrew Clymer Biehn, of Pennsylvania, with certificates of honorable mention to William George Kleinstuber, of Pennsylvania, and Wilmer Krusen, of Pennsylvania.

5. A gold medal for the best essay on a subject pertaining to the practice of medicine; to Rudolph Emile Müller, of Switzerland, with a certificate of honorable mention for the essay of Peter Charles Green, of Pennsylvania.

The President, ex-Mayor Fitler, introduced Professor Keen, who gave the valedictory address.

THE WOMEN.

At the forty-fifth annual commencement of the Woman's Medical College, forty-seven graduated, the largest class in the history of the institution. The address was delivered by Dr. Anna M. Fullerton. The gold medal in surgery was awarded to Jannat Ernestine Hills, of New York.

City Solicitor Warwick has decided that when an alley has been declared a nuisance, the Board of Health has the right to have it repaved with asphalt. This is a matter of great importance, as the alleys present one of the most difficult problems in city sanitation. Cleaning is often impossible, as the brick paving, laid without foundation, soon becomes broken up and the dirt lies in holes. With asphalt paving, properly laid and graded, there is no excuse for dirty alleys.

According to the *Shoe and Leather Reporter*, a convict in a certain penitentiary, whose crime was dishonesty, is compelled to spend his days cutting out pieces of pasteboard which are put between the outer and inner soles of shoes which are to be sold as made of solid leather. This discipline doubtless proceeds on the homœopathic principle, that "like cures like"

To the large number of persons whose sympathies with a wife murderer are of a hysterical character, and who have exhausted the possibilities of Carlyle Harris, the conviction of Dr. Buchanan will fill an aching void.

In his address to the P. E. Convention, Bishop Whittaker referred as follows to the danger from the cholera:

"During the greater part of the year the prevalence of cholera in various parts of Europe has excited the fears of many in regions where the disease has not appeared, and its possible manifestation in the United States is now a source of anxiety from which no one can be wholly free. The danger is no doubt increased by the relaxation of the stringency of the quarantine regulations which had been established, and in our own city by the peculiarly favorable conditions existing for its rapid development should it once appear. Having these facts in mind, I set forth, a few weeks since, a prayer to be used in our churches, in which, after referring to the instructions which God gave to the chosen people in the wilderness for preserving health and preventing contagion, there follows this petition: 'God gave us wisdom to do all that in us lieth to avoid this, so great a plague.' These words recognize that, to a great extent at least, the prevalence or non-prevalence of cholera is within our own control. The nature of the disease is now supposed to be understood; it is not supernatural; it does not come upon nations or places as an arbitrary infliction from God. It is a natural result of the violation of His law just as truly as trembling nerves and a shattered constitution are the penalty of drunkenness. It is truly, wherever it exists, a judgment that is not arbitrary nor capricious, but in exact accordance with the law which he has made for the governance of the world. We can do something to prevent the cholera ravaging our city, causing it to be shunned by all travellers, injuring its business, carrying terror into many families, destroying the happiness of many homes, taking away the lives of those we love, and perhaps our own. We pray for wisdom to do all that in us lieth to avoid this plague. Have we considered what we can do, and are we doing it? The cholera is a dirt disease—it is born of foulness, it thrives in filth."

He then referred to the connection of cholera with impure water, and the necessity of keeping the house and vicinity clean, enforcing the sanitary laws, especially where the people are not likely to see to things themselves.

The following questions were given out at the examination of candidates for Philadelphia City Hospital Residencies:

1. Give the differential diagnosis of amyloid kidney, parenchymatous and interstitial nephritis.

2. What pathological condition would you find, if you had the following symptoms: Headache, tinnitus aurium, epistaxis, dry cough, dyspnœa, flushed face, rapid and forcible heart action, and pulsating aorta?

3. What is opium? Name its alkaloids and give the conditions for its administration.

4. Describe the treatment of post partum hemorrhage.

5. Name the objections to the use of ergot in labor.

6. Give the pathology and treatment of Pott's fracture.

7. Give the differential diagnosis of cardiac dilatation, and pericarditis with effusion.

8. (*a*) Give the etiology of appendicitis. (*b*) Give the most useful diagnostic points. (*c*) Give the indications for operative interference.

9. Give the diagnosis and treatment of Asiatic cholera.

10. Give the diagnosis and treatment of diphtheria.

Electro-Therapeutics.—The most important advance in modern electro-therapeutics, is the method elaborated by Dr. W. H. Walling, which consists in the introduction into the system of an indicated medicinal substance by means of the galvanic current, *in strict conformity with the unerring laws of electro- hemistry*. Benjamin Ward Richardson first demonstrated that chemical agents could be passed into the human body through the agency of galvanism; but to Dr. Walling is due the credit of showing that the pole to be employed varies with the nature of the drug administered, and of *preconising* the rules for this valuable method.

Changes in the Medical Corps of the U. S. Navy for the week ending May 6, 1893: Assistant Surgeon, James G. Field, ordered for examination preliminary to promotion.

The Times and Register.

Vol. XXVI. No. 20. PHILADELPHIA, MAY 20, 1893. Whole No. 767.

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Original Articles.

A NEW INDUCTION APPARATUS FOR MEDICAL PURPOSES.

By AUGUSTIN H. GOELET, M. D.
NEW YORK.

THE advantage of the combination of secondary induction coils, known as the Goelet Faradic Battery, is that the variations of the current to be derived therefrom render it universally useful in applying this agent (in this form) to a greater variety of conditions than was ever possible with the old forms of faradic apparatus.

To appreciate the qualities of the secondary induced (faradic) current the fact must be borne in mind that its character is varied both by the number of turns or convolutions of the wire in the secondary coil, surrounding the primary whence the current is derived by inductive influence, and also by the greater or less resistance offered the current by the coil itself, this resistance being greater, the longer and finer the wire; and less, the shorter and coarser the wire. That is, upon the variation of the two qualities electromotive force and volume, depends the difference in its character and its therapeutic properties. The electromotive force is increased by multiplying the number of turns in the secondary coil, and is diminished by reducing the number of turns. At the same time that the number of turns are multiplied, the length of the wire the current must traverse is increased and with it the resistance, and the volume of the current is consequently diminished. When a fewer number of turns of wire are employed there is less electromotive force, and as the resistance in the coil itself is decidedly less, the volume of the resulting current must be greater. In order to make the volume of the current still more pronounced, a coarser wire which offers less resistance is employed. Therefore it is said that the current from a coil of long fine wire is a current of greater electromotive force (tension) and less volume than that derived from a coil of short coarse wire, the latter being a current of more volume and less electromotive force.

The necessity of using a fine wire in these long coils is not only on account of the increased resistance it offers and its modifying influence upon the volume of the current, but also because it brings the outer turns nearer the primary than would be possible if a coarser wire was used, and therefore more certainly within the range of the lines of magnet force.

By increasing the electro-motive force of the faradic current in this manner, a near approach to the static current is obtained, and the volume becomes com-

paratively inappreciable. Its high tension with inappreciable volume renders this current capable of producing a sedative effect with a minimum degree of pain. That is, the sedation effected in this manner is brought about by an intense stimulation of the sensory and motor filaments in which painful impressions are eliminated. A comparison with a drug like opium might be appropriate, which, though a cerebral stimulant, exerts a sedative influence.

It is then in order to produce sedation by an intense stimulation which will be painless, that the electro-motive force or potential of the current is increased and the volume is rendered inappreciable, since it is that quality, volume, which renders the stimulation exciting and painful. Hence when it is desired to produce sedation, the current from a long fine wire secondary coil is employed. The best of the ordinary forms of faradic apparatus are unsuitable because the current they afford is not of sufficient tension or electro-motive force. The coil is composed of a comparatively short length of rather coarse wire, consequently the turns or windings are few in number. The current is therefore incapable of a sedative effect, though it may be useful for muscle stimulation.

Ordinarily a coil of No. 32 wire, 600 or 800 yards in length, would be sufficient for effecting sedation in some conditions, but frequently very sensitive conditions are met that would be aggravated by this current and something better or a higher tension current is needed. The coil of finest wire No. 36, 1500 yards long, is to be used in very sensitive conditions until it ceases to be appreciable to the patient, then by means of the switch 500 yards are thrown out of use and the 1000 yards' length is employed. Likewise when this ceases to be appreciable, by a turn of the switch a length of only 500 yards is employed. In this manner a very gradual increase in the stimulating properties of the current is obtained and sedation is more rapidly effected. Some cases demand a greater degree of stimulation (either at the start or after treatment has been continued for a time) than is possible to obtain from the current given off from the 500 yards length of a No. 36 wire, and for this reason a coil of No. 32 wire, 800 yards long, has been added. This is split up into different lengths, 500 and 300 yards, in

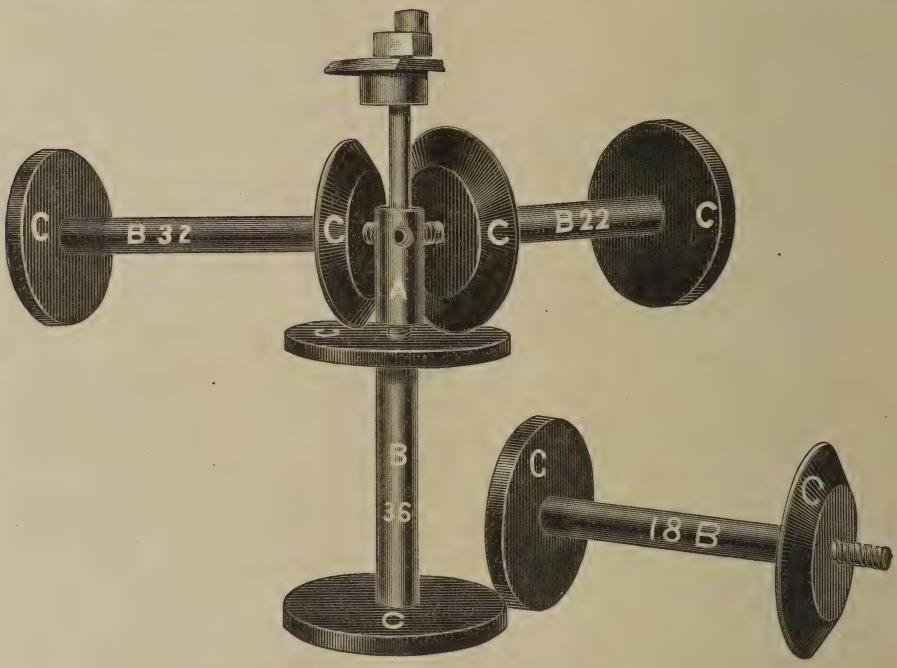

PLATE I.

the same manner as the other coil, so as to gradually increase the stimulating properties of the current to suit different conditions.

The current from the finest wire coil and greatest length is employed then in very sensitive conditions where a greater degree of stimulation would be painful. Everything depends upon the sensitiveness of the particular case under consideration, and experience is necessary to determine just what coil can be employed to the best advantage, but it is best to begin with the coil of No. 36 wire, 1500 yards long, and diminish the length of the coil as sedation becomes manifest and

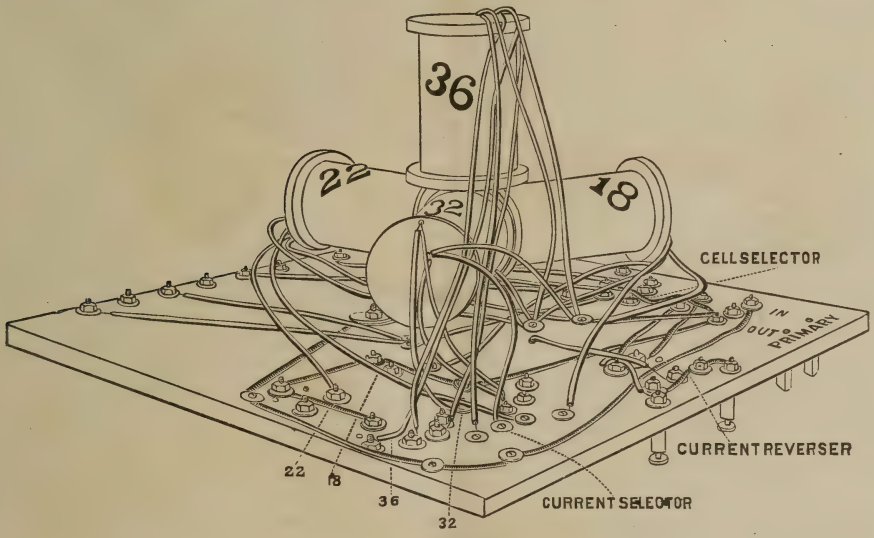

PLATE II.

more stimulation is demanded. The current must be turned off by means of the rheostat controlling it in every instance before this change is made.

Some cases demand even a greater degree of stimulation, and to meet this demand a coil of No. 22 wire, 250 yards long, is added. When it is understood that the current from this coil corresponds with that in batteries ordinarily sold for medical purposes, the folly of attempting to use them for obtaining a sedative effect is apparent and the advantage of the combination under consideration here will be readily appreciated.

The applications must be prolonged to ten, fifteen or twenty minutes in order to produce satisfactory sedation, and the interruptions at the vibrator must be rapid and even. That is, the note given off by the vibrator must be clear and distinct.

When the bi-polar method is employed in the vagina, both poles or terminals must be wholly within the vagina and removed from the highly sensitive vulva orifice. If the bi-polar method is employed in the uterus, both poles must be within the cavity and removed from the sensitive internal os.*

It is from the short coarse wire coil of No. 18 wire, one hundred yards long, that the current of volume, strictly speaking, is derived. This is a painful muscle contracting current, serviceable in conditions of sub-involution and in chronic cases where there is considerable loss of tone. Slow interruptions must be used with this current.

The apparatus as made by the Chloride of Silver Dry Cell Battery Co., of Baltimore, is operated by twenty of their cells connected four in multiple and then in series. A switch turns on one of the multiple couplets at a time and a Willm's rheostat is placed in the secondary circuit for controlling the current. Binding

*For a more complete description of the method and its advantages, and details of its administration, see Goelet's Electro-Therapeutics of Gynæcology. Published by Geo. S. Davis, Detroit, Mich.

posts are arranged for attaching permanent office cells (four or five Leclanché are best for office use) so that the chloride of silver cells on the battery may be saved for outside work. A neat device is attached for selecting the current desired from any one of the coils and switches turn on the different lengths of wire.

Directly upon and around, the primary wind of spool marked "18," is wrapped a secondary winding of 100 yards of No. 18 double-covered paraffined wire.

Upon the primary wire of spool marked "22" is wrapped a secondary winding of 250 yards of No. 22 double-covered paraffined wire.

Upon the primary wire of spool marked

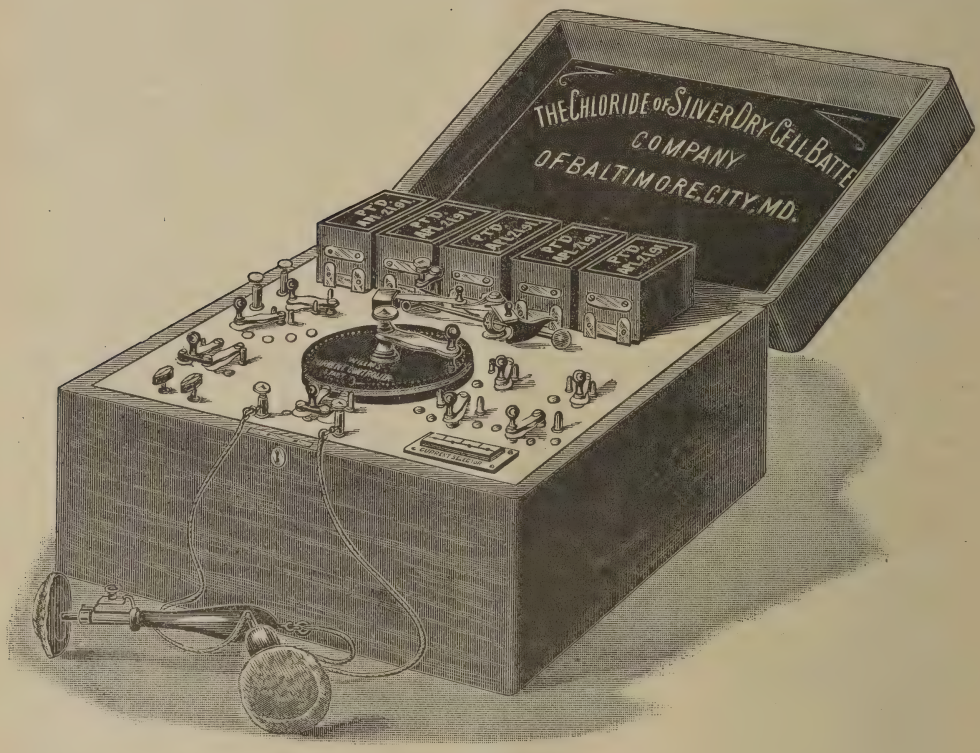

PLATE III.

MECHANICAL DESCRIPTION OF THE INTERNAL MECHANISM OF THE "GOELET" BATTERY.

PLATE I.—Into a 3½ inch perpendicular bar of soft iron "A" are drilled four holes provided with screw threads, being cut about the center of the sides of the soft iron bar, and one into the bottom. Into each of these threaded holes are to be screwed four ½-inch bars of soft iron "B" which are provided at either end with hard rubber discs "C," forming the spools. Each of these spools are wound with sufficient No. 26 double covered paraffined wire to offer a resistance of 13 ohms. These windings of No. 26 wire constitute the *Primaries*.

"32" is wrapped a secondary winding of 800 yards of No. 32 double-covered paraffined wire, these 800 yards being tapped at 300 and 500 yards.

Upon the primary wire of spool 36 is wrapped a secondary winding of 1500 yards of No. 36 double-covered paraffined wire, these 1500 yards being tapped at 500 and 1000 yards.

After these various windings of four primaries and four secondaries are completed, the spools are screwed into the upright bar of soft iron "A," and thus forms the multiple induction coil of the battery.

PLATE II, shows the multiple coil complete, and indicates the manner in

which the battery is connected. This plate shows that the connections are made in such a way that, if the contact key is placed into hole marked "18" of current selector, the induction of that spool takes place only, and spools containing 22, 32 and 36 wire are entirely out of the circuit. The same is the case if contact key is inserted into holes of current selector marked "22" or "32" or "36," all other spools being out of circuit except that represented by the hole into which contact key is placed.

PLATE III, presents a view of the top plate of the battery, and the various markings which have been made will explain themselves.

1. The secondary wires, being wound directly around the primary spools, the current is not required to traverse a magnetic field of about one-eighth inch in order to induce the secondary. This is a great advantage over the Dubois Raymond coil, in which the secondary wires are wrapped around a movable spool, with a space of about one-eighth inch between it and the primary coil, so that induction cannot be as advantageous as direct windings of secondaries around primary.

2. In the Dubois Raymond coil, if more than one secondary is required, special spools must be provided, which is quite a little inconvenience in a visiting battery, and does not by any means improve the appearance of an office table. In the multiple coil, we have four direct secondary windings, which are not connected in any way with the primary, and any one desired may be selected, to the exclusion of all others, by means of the current selector.

3. The current strength of the battery is not controlled by moving a secondary spool over the primary coil, but the entire current first passes through the coil, which is in circuit, then enters the rheostat, and from there it passes to the body. The rheostat used in connection with this battery having a radius four inches in diameter, is equivalent to a twelve inch Dubois Raymond coil, and we have a gradually increasing current to its full length. Satisfactory induction cannot take place in a Dubois Raymond coil if the magnet is over four inches in length, so that there is the additional advantage of a twelve inch coil with effected induction to its full length.

4. This rheostat enables the operator to more completely control his current than is possible in the use of the Dubois Raymond coil, for even if the secondary spool of the Dubois Raymond coil is moved only a short distance over the primary coil, a considerable increase of current is obtained. In the rheostat connected with the multiple coil instrument the increase is so gradual that at the start it is hardly perceptible at all, and increases very gradually as the arm of current controller is moved around.

A CASE OF MALIGNANT SYPHILIS RESULTING IN DEATH.[1]

BY A. E. ROUSSELL, M. D.,

[Lecturer on Physical Diagnosis and Clinical Medicine, Medico-Chirurgical College; Physician to the Howard and to the Southwestern Hospitals; Consulting Physician to the Temporary Home for Young Men, etc.]

J. P., born in France, aged forty years; chef. Good family history and excellent health (never having been sick since childhood) until the appearance of a chancre twenty-two days after exposure, which soon took upon itself a phagedenic character, and was shortly followed by induration of the inguinal glands.

Nine days after he first noticed the initial lesion the patient was suddenly confined to his bed with all the symptoms of an acute attack of rheumatic fever, and was, indeed, so treated by his physician for a period of four weeks. At the expiration of this time, the disease being apparently no better, the doctor was discharged and I was called in to the case.

After a careful examination I discovered a suspicious eruption on the body (roseola), and obtaining the above history, verified the presence of the chancre, which had not yet thoroughly cicatrized and bore evidence of its destructive ravages.

The pains complained of were not solely localized to the joints, which were, however, hot and slightly swollen, but were also particularly severe in the long bones of the leg and characterized by their nocturnal exacerbation.

Examination of the internal anterior surfaces of the right tibia in its upper

[1]Read April 26, 1893.

third revealed the presence of a small tumor, intimately connected with the bone. It measured 5½ centimetres in its transverse diameter by 4½ centimetres in lenghth, and projected to the extent of about one centimetre at its most salient part, but the edges were insensibly lost in the surrounding tissue. To the touch it was almost as hard as the bone itself, and was surrounded neither by œdema nor peripheral inflammation, and the skin covering the part was both healthy and mobile.

The patient claimed to have noticed its presence for about ten days, but was certain that it was at no time attended by external evidences of inflammation, and thought that its growth was most rapid at the onset. The localized pain, which dated from its beginning, was extremly lancinating, but paroxysmal in character and greatly increased by the slightest movement.

The fever at this time was rather quotidian in character, the morning temperature averaging 99.5°, and rising in the evening to about 103°, unaccompanied by chill, but by intense cephalalgia, which continued for a period of three or four hours each evening, after which a profuse perspiration took place.

Under the mixed treatment the case rapidly improved and the patient was able to resume his occupation in two week's time. The growth in question slowly diminished in volume and had practically disappeared in about one month, with the exception, however, of slight permanent thickening at the crest of the tibia, which remained the seat of occasional intermittent pains.

Three weeks later (about ten weeks after the appearance of the chancre), during office treatment, my attention was called to the sensation of pain referred to the roof of the mouth during the act of eating.

An examination of the part showed a considerable amount of brawny swelling, together with a deep, irregular, yellowish ulcer near the median line, about 2½ centimetres in size, and surrounded by a line of inflammatory redness. A few days afterward the ulceration in question was noticed to have spread considerably and had apparently invaded the deeper structures.

Notwithstanding all local treatment directed to the part in conjunction with internal medication, the destruction of tissue continued until the bone itself became affected. About this time the patient was seen by Dr. William G. Porter in consultation, but in spite of our united efforts necrosis of the hard palate, as well as of the alveolar processes of the superior maxillary bone and of the nasal bones occurred in turn, and the ulceration only assumed a latent condition during the last half of the malady when a perforation the size of six or seven centimetres had taken place. This was attended by the loss of several teeth and imparted to the voice the nasal sound characteristic of this affection.

Shortly after the beginning of the necrosis the patient commenced to rapidly lose in weight and strength, and a marked cachexia became an important feature of the case.

A pustular eruption of the face and scalp was now noticed. The bone pains returned and the debility was so great that the patient was confined to the house. Curious to state, the appetite was greatly increased ; indeed, the condition of syphilitic boulimia, so well described by Fournier, soon became manifest, as on several occasions during the absence of the wife, the patient invaded the pantry and partook, according to his own estimate, of enough food to satisfy three or four men.

It may be *apropos* to mention here that the patient had become, to a certain extent, accustomed to the trouble occasioned by the passage of food and could now swallow fairly well.

This condition was attended by little digestive disturbance beyond on rare occasions, slight attacks of diarrhœa ; but, on the other hand, gastric crises became an important feature and seemed especially to be aggravated by any form of mercurial treatment. These painful attacks continued throughout the progress of the case, and were equally noticeable during a course of restricted diet.

In the eighth month the anæmic condition was extremely marked, and the patient, from a weight of one hundred and ninety pounds was reduced to one hundred and forty pounds. In despair he entered the Pennsylvania Hospital

but remained only for two weeks, his chief grievance being the restricted diet to which he was subjected, and which ill accorded with his continued enormous appetite. During this, as well as on previous occasions, careful and repeated examinations revealed no disease of the special organs.

An examination of the blood showed three millions of red corpuscles per cubic millimetre and a diminution of the hæmoglobin to forty per cent. An anæmic basic murmur as well as venous souffle were also to be detected.

Added to this, prostration, the sallow complexion, pallid face, pinched features, and sunken eyes, made a picture long to be remembered.

In the tenth month œsophageal obstruction was complained of, and an examination by bougie, made by Prof. E. Laplace, showed some constriction which, however, did not become extreme. At this time localized pains in the lumbar region began and soon became excruciating in their severity. This was attended by occasional loss of control of the sphincter of the bowel and remained present until the close of the disease.

Some three weeks before his death he was removed from under my care to the Medico-Chirurgical Hospital, but the prostration became more marked and he died a little over one year after the beginning of the disease.

Unfortunately, notwithstanding strenuous efforts, a post-mortem was refused.

As may be imagined in a case of the above character, our treatment was as varied as it was unsuccessful.

Early in the case the exhibition of either mercury or of iodide of potassium seemed to aggravate the gastric crisis, and, besides, to be followed by an irritative diarrhœa. Inunctions were tried in turn, but with similar results. Fumigations were likewise discontinued for the same reason, and even the recently vaunted hypodermatic method was certainly open to the same objection. Of the number, the inunctions were continued for the longest period of time. General tonic treatment, although better born, was of little apparent use.

On investigating the literature of this subject I find a rather growing tendency among the more recent syphilographers to appreciate that our accepted laws regarding the three fixed and precise stages of the disease must be amenable to some modification.

For example, Keyes, in his last edition, writes as follows: "The line between secondary and tertiary syphilis is not always well marked, and although in typical cases the lesions become progressively deeper, commencing as mere efflorescences in the secondary stage, and gradually increasing in severity to the most extensive ulcerations and destruction of bone and cartilage in the tertiary; yet some of the symptoms naturally belonging to the secondary group, as the mucous patch and scaly eruption, frequently crop out in the tertiary stage, while more rarely nodes come on with early syphilis, and occasionally most extensive ulcerative or other tertiary (gummy) lesions appear within the first few months after chancre, perhaps all the lighter secondary eruptions having been omitted. This latter form is called malignant syphilis." Osler tells us (*Practice of Medicine*, 1892) that "in exceptional cases, manifestations which usually appear late (such as gummatous growths) may set in even before the primary sore has properly healed."

C. Mauriac, one of the most eminent of the French authorities, in his very interesting work (*Mémoire sur les Affections Syphilitiques precoces du Systeme Osseux*, Paris, 1892), details the history of a number of cases, of which the following is a short *résumé :*

Observation I.—Case beginning with indolent enlargement of both inguinal glands. Eight days afterward appearance of chancre. On the twentieth day of the initial lesions attacks of cephalalgia with appearance of frontal tumors. Then secondary symptoms, cutaneous and mucous, etc. Mixed treatment. Cure.

Observation II.—Period of incubation of two months duration. Short duration of secondary symptoms. Parietal tumor with neuralgic pains.

Observation III.—Omitted. Dates uncertain.

Observation IV.—Chancre of lip; swelling of cervical glands. One month afterward slight secondary symptoms followed by tumor on parietal bone.

Observation V.—Syphilis of five

months' duration without treatment, tumor in front-temporal region, etc.

Mauriac claims that these nodes are the results of periosteal inflammation, and tend to spontaneous recovery without suppuration, etc. But he quotes an account of a case reported by Dr. Henri Roger, which results in a different manner :

A girl. aged two years, acquired syphilis (kissing an infected mother), presented the following lesions at the same time: 1st. Indurated chancre on the superior lip not yet entirely healed. 2d. Copper-colored spots of roseola on thighs, on forehead, nose, and cheeks, and mucous patches on the vulva and anus. 3d. Multiple exostoses ; gummy tumors of the frontal bone the size of a filbert; skin-covering healthy ; semi-soft consistency ; the right one reddish and shining at apex, imparting the sensation of fluctuation, and did in time suppurate.

Mauriac details the occurrence of other cases presenting similar lesions in the bones of the legs, sternum, and other parts of the body.

In these thirteen cases the shortest period of incubation after the appearance of the chancre was fifteen days, and the longest one hundred and twenty days. Curiously, the shortest of the series presented a history which resembles in part one forming the subject of this paper. Briefly stated it is as follows :

Observation VII.—Urethral chancre in a man aged nineteen years, of habitually good health, which showed itself one month after his first connection. On the forty-fifth day acute pains in the tibia, followed in from twenty-six to forty-eight hours by the spontaneous appearance of a bony tumor. Alteration of general health. On the sixty-ninth day well-characterized roseola. On the sixtieth day diminution of tibial tumor and final disappearance. Four and a half months later mucous patches on lips and prepuce. Papular syphilis, etc.

Vidal de Cassis (*Traité des Maladies Vénériennes* 2d edition, pp. 479, 480) reports a case of a tumor of the right clavicle occurring one month after chancre. The skin-covering is perfectly healthy, the tumor twice the thickness of the bone. Extreme localized pains. Cure in two months time. Dr. Guyot (*Societé Médico Chiurgicale de Paris*, July 9, 1868) reports a case of syphilitic periostitis of the first metatarsal bone, fifty-six days after infecting exposure.

According to M. Daga ("Documents pour servir á l'Historie de la Syphilis chez les Arabes " *Archives de Médecine*, 1864, t. ii. p 314), syphilis is so severe among the Arabs, that it is not rare to witness in the same subject the presence of syphilides, of gumma, and of multiple exostoses. Tertiary symptoms themselves may be observed at the very beginning of the disease.

According to the researches of M. Mantegazza syphilis pursues its course with great rapidity in South America, and manifests itself from the beginning not only by superficial cutaneous and mucous lesions, but by osseous lesions and even the destruction of the bones of the nose almost immediately after the appearance of the chancre, and always before its cicatrization. (Quoted by Mauriac.)

As eminent an authority as Prof. Hutchinson, of London ("Some of the Moot Points in the Natural History of Syphilis," *British Medical Journal*, January 23, 1886), reports the following interesting case :

" A young man, aged twenty-one years —too young, let me note, for it to be likely that he ever had syphilis before—was admitted into the London Hospital. He had still the remains of a hard chancre on him which was ulcerating in places.

The date assigned to the beginning of the effection was only four months previous. He died suddenly and unexpectedly. The necropsy showed gummata in both testicles, in the spleen, and in the heart, death having been caused by the softening ulceration of the latter."

He adds, in conclusion :

" I have urged that many of the phenomena of syphilis usually counted as tertiary really occurs, as a rule, in the early periods, and there is no structure of the body which may not be attacked in the secondary stage. As an instance of this fact, I have mentioned rupia, periostitis, and disease of the viscera and nervous system."

Dr. R. W. Taylor, of New York, in an article entitled "Precocious Gummata" (*American Journal of the Medical Sciences*, July, 1887), describes several interesting

cases of that form of the skin affections. He says, in conclusion, that these lesions may appear as early as the second, third, or fourth month after the initial lesion and may terminate in ulceration.

Records of early syphilis of the nervous system are also attainable.

Taylor reports a case of hemiplegia in the fifth month.

Bassereau and Vidal de Cassis one of facial paralysis a few weeks after appearance of chancre.

Van Buren and Keyes and Fournier respectively give instances of several cases of different forms of paralysis occurring before the fifth month.

Fortunately these cases are very rare. For example, Mauriac mentioned that the thirteen cases reported by him represented an experience of over four thousand cases. Whether they represent an unusual amount of the virus absorbed, or an undue susceptibility on the part of the individual, is an open question.

The generality of opinion would seem to indicate the possibility of a severe syphilis following a case of phagedenic chancre, as in this report. For example, Batington tells us (Ricord and Hunter, *Venereal Diseases*, second edition, p. 371) that "the symptoms which follow the phagedenic sore are peculiarly severe and intractable. They commonly consist of rupia, slouching of the throat, ulceration of the nose, severe and obstinate muscular pains, and similar inflammation of the periosteum and bones. Similar complaints will follow the ordinary chancre; but when they follow a phagedenic sore they are very difficult to be cured; and it is not uncommon that the constitution of the patient should at length give way under them, and the case should terminate fatally."

Bassereau (*Histoire Naturelle de la Syphilis*, p. 84), as well as Diday, agree in the main regarding the above statements.

Bumstead and Taylor (*Venereal Diseases*, fifth edition, p. 499), in commenting on the above, express themselves as follows: "Admitting the truth of this rule, it does not follow that the condition of the chancre in any manner determines the severity of subsequent symptoms, but merely that it is an indication of the activity of the virus and of the state of the patient's system—the two causes upon which the severity of the attack chiefly depend."

The latter observation does not corroborate the history given both by my patient or the members of his family. It was particularly claimed that he had enjoyed unusually good health throughout his life, and the quantity of alcohol which he made use of was not in excess of that commonly used in his occupation.

Regarding the presence of the nodules on the tibia, these latter occurred after a longer period of time than in the one case (Observation VII), reported by Mauriac, yet the gummatous ulceration of the hard palate at so early a period is, as far as I can discover, without a detailed precedent, and certainly places this history prominently among similar records.

REPORT OF A REMARKABLE SERIES OF THIRTY-THREE CASES OF DIPHTHERIA TREATED BY THE TARTARIC ACID CORROSIVE SUBLIMATE OF MERCURY METHOD.[1]

By M. GRAHAM TULL, A. M., M. D.

[Visiting Physician to the Baptist Orphanage.]

DURING the summer of 1889 my attention was attracted to an editorial in the *Medical News* which gave a synopsis of an article that appeared a short time previously by Dr. Rennert, of Frankfort-on-the-Main.

The substance of the article was to the effect that Rennert, while passing through an epidemic of diphtheria of great malignancy, and in which he had lost a great many cases, recollected that Laplace had but recently proved by direct experiment that corrosive sublimate in solution, slightly acidulated with tartaric acid was, by far, the most efficient of any of the germicides to be found, as applied to the bacteria of diphtheria.

Whereupon Rennert immediately changed his treatment. In addition to the conventional methods he had the throats thoroughly swabbed every six hours with a 1:500 tartaric acid corrosive sublimate solution, making sometimes four or five applications at one sitting.

[1] Read before the Philadelphia County Medical Society, April 26, 1893.

After instituting this procedure he did not lose a patient, although the epidemic had not apparently begun to decrease in virulence.

I was at this time using as a disinfectant in obstetric work the so-called tartacid sublimate tablets of Mulford & Co., of Philadelphia, consisting of 3.85 grains of hydrarg. bichloride to 19.25 grains of tartaric acid. The addition of one of these tablets to four ounces of water makes a 1:500 solution. I, therefore, resolved to adopt Rennert's plan in future cases of diphtheria, as the rationalé of the method appealed very strongly to me.

It so happened that the following autumn I had from forty to fifty cases, and my experience fully corroborated the results of Dr. Rennert. I lost no cases treated by this method, although three children who had contracted the disease from my patients died of it. Two of these I saw after they had been ill a number of days, but they were then almost in articulo-mortis. The third was a case of my own which did so well under the treatment that the parents, against my advice, persisted in their previously-formed intention of moving to another part of the city. The great distance debarred me from continuing in the case, and I subsequently learned of its death.

After this my cases were so few and scattered that, although the method proved eminently satisfactory, I kept no record of them.

During the autumn and winter of 1892, however, the following very interesting and, I trust, instructive series of thirty-three cases came under my observation at the Baptist Orphanage, of Philadelphia.

Late in the preceding winter two cases of diphtheria, in half grown children, appeared in a farm house directly opposite and distant about one hundred yards from the Orphanage. The disease presented a very malignant aspect, and, notwithstanding the faithful care of a competent brother practitioner, both children died after an illness of a week or ten days. A number of other cases appeared in the village at this time, one of which I happen to know resulted fatally.

The following August one of the boys at the Orphanage, a lad of sixteen years of age, who had been assisting the gardener spread manure that had been obtained from the farm where the children had died the preceding winter, was suddenly taken ill with fever, vomiting, and slight sore throat. My first visit being made at dusk, I fancied the case one of beginning scarlatina, of which we had had a few cases the preceding spring; but upon my visit the following morning the diagnosis of diphtheria was apparent, and I lost no time in having him transferred to the Municipal Hospital, dreading the entrance of the disease among so many children.

Unfortunately, we were too late, and in the next few days nine of the boys from the same cottage developed well-marked cases, and were at once isolated in a separate building which had been converted into a temporary infirmary. A trained nurse was obtained and the children placed under treatment at once. As a routine measure, each child was given the following tablet-triturate: hydrarg. chlor. mit., gr. $\frac{1}{5}$; sodii bicarb., gr. j; ipecac, gr. $\frac{1}{10}$; every half hour until free movements of the bowel ensued, and after that they were continued every two hours. The following mixture, modified to suit the varying ages, was also employed: ℞.—Quininæ sulph., potas. chlorat , potas. citrat., syr. ferri chlor. (P. D. & Co.), syr. yerba santa.—M. et Sig., one drachm every two hours.

The nourishment consisted of liq. peptones (S. & J.) and milk at the commencement of the cases, rapidly followed by a full diet as the patient convalesced. In addition to this the nurse was instructed to apply every three hours, by means of a cotton swab, 1:500 solution of the tartaric acid corrosive sublimate tablet, made by dissolving one of Mulford's tablets in a gill of water.

The results were immediate and remarkable, the temperature falling, the pulse becoming normal, and the aspect of the child undergoing an astonishing change. The course of the membrane across the fauces was checked, and in each case came way in about forty-eight hours. All of these children were practically well in two days, while the first case, which was transferred to the Municipal Hospital, was quite seriously ill for some time, and was not discharged for over six weeks.

The effect of this unusual success in the first nine cases was, in some respects, followed by unpleasant results, though of great value to this paper, furnishing, as it does, complete check experiments upon my other cases.

A feeling of skepticism was developed in the minds of the attendants, and even the nurse was tainted by the prevailing feeling. So that, after the children first affected were about ready to return to their cottages, being allowed to play on the veranda on pleasant days, the strict quarantine which I had endeavored to establish was completely relaxed, and visits of more or less ceremony were exchanged between the nurse and the matrons of the other cottages.

I had promised to return the children to their own building on Wednesday, but on the Friday preceding five of the children in the so-called children's cottage were taken ill with fever, vomiting, coated tongues, etc., not, however, complaining of their throats.

The matron of their cottage, who was a law unto herself, said: "The doctor was mistaken in thinking that the children who were sick had had diphtheria, and that she would not allow her little ones to be taken to the infirmary, but would show him that she could treat them as well as he." She, therefore, had them taken to the third story of her building, and allowed the well to stay with and amuse the sick. This was, of course, in direct opposition to my order that any child with the slightest suspicious symptoms should be sent immediately to the infirmary, where we had provided a separate apartment for such cases.

The first child was taken ill on Friday, and on Monday evening, after what I had hoped would be my last visit to the infirmary, the matron stopped me to say that she had five children ill with a slight stomach derangement, assuring me at the same time that there was nothing wrong with the throats, as she had carefully examined them. I declined to see them then, having just left a diphtheritic atmosphere, but called the next afternoon, having been prevented from going earlier, owing to urgent professional engagements. To my horror and disgust I found the children had had diphtheria for some days, their sickness having been carefully concealed from me. They were at once removed to proper quarters, but the disease had acquired such headway that in four or five days three of the five died, all of them dying of heart and kidney involvement, being victims, in my opinion, of the development and absorption of the diphtheritic ptomaine. After this fresh outbreak we had eighteen other cases, two of whom died; one a child two years old with a very bad family history, all of his family connection being dead, and the other a child four years old, also with a bad family history, who at the height of the diphtheria developed a very violent attack of measles and succumbed to the combined force of the two diseases.

I have only been able to get the charts of the first nine cases, which I here append:

CASE I.—George T., aged eleven years, entered the infirmary on September 5, 1892. Temperature on entering at 6 P. M., 102°; pulse, 120. At 8 P. M., after swabbing, temperature 100.8°; pulse, 100. September 6th, 11 A. M., temperature, 101°; pulse, 99. 11 P. M., temperature, 99.4°; pulse, 80. September 7th, 2 A. M., temperature, 98.4; pulse, 84. The diphtheritic patch disappeared. Uninterrupted recovery.

CASE II.—Harry McK., aged ten years, admitted September 4th, 6 P. M., temperature, 98.8°; pulse, 84; throat very much inflamed, but no patch. 5th inst., throat considerably ulcerated; 8 A. M., pulse, 80; temperature, 98.6°. 6th inst., 5 A. M., pulse, 69; temperature, 98.4°. Patch disappeared. Uninterrupted recovery.

CASE III.—Thomas H., aged ten years, admitted August 27, 1892, 4.30 P. M., pulse, 105; temperature, 101°. 10 P. M., pulse, 110; temperature, 102.6°. Throat with large, dark patch. Treatment continued through the night, and recorded every two hours. August 28th, 12 M., pulse, 90; temperature, 98.4°. 6 P. M., pulse, 84; temperature, 99.4°. 9 P. M., pulse, 84; temperature, 98°. 12 midnight, pulse, 86; temperature, 98 4°. Ulcerated condition disappeared on 28th inst. Uninterrupted recovery.

CASE IV.—Fred. D., aged nine years, admitted August 30th, 4 P. M., pulse, 105; temperature, 104°. 7 P. M., tem-

perature, 103. 10 P. M., temperature, 100.6°. 31st inst., temperature, 99.2°. September 1st, 1 A. M., temperature, 98.8°. 1 P. M., temperature, 98.4°; pulse, 80. In this case on entering he had offensive breath, large patch extending back on the fauces, coated tongue, flushed face, bad headache, etc. Recovery was uninterrupted.

CASE V.—Elmer G., aged eight years, admitted August 31st, 2 P. M. Face flushed; throat badly ulcerated, extending upon the fauces. Pulse, 103; temperature, 101.6°. 5 P. M., temperature, 101.4°; 8 P. M., 100.4°; 11 P. M., 100°. September 1st, 2 A. M., temperature 99.8°; 5 A. M., 99.8°; 2 P. M., 99.4°; 11 P. M., 98.6°. September 2d, 2 A. M., temperature, 98.4°. Uninterrupted recovery.

CASE VI.—Roland S., aged seven years, admitted August 31st. Patch large and extended. Breath very offensive. Gland on left side enlarged. 11 A. M., pulse, 116; temperature, 102.2°. 2 P. M., temperature, 103.6°; 5 P. M., 102°; 8 P. M., 101.2°; 11 P. M., 100°. September 1st, 2 A. M., temperature, 98.8°; 11 A. M., 102°; 2 P. M., 99°; 8 P. M., 98.4°. Uninterrupted recovery.

CASE VII.—Thomas C., aged twelve years, admitted September 3d. 5 P. M., temperature, 102°; 8 P. M., 103°; 11 P. M., 102°. 4th inst., 2 A. M., temperature, 102.2°; 5 A. M., 100°, 8 A. M., 100°; 11 A. M., 99.4°; 2 P. M., 98.6°. 5th inst., 2 A. M., 98.4°. Recovery uninterrupted.

CASE VIII.—Willie H., admitted August 27th. Diphtheritic patch large. Cervical glands very much swollen. Temperature, 7 P. M., 99.6°. Ranged below this until the 29th inst., when at 4 P. M. it fell to 98.4°, and remained so. Recovery uninterrupted.

CASE IX.—Charles W., admitted September 10th. 5 P. M., temperature, 102.2°. Throat involvement marked. 8 P. M., temperature fell to 98.6°. 11th inst., at 8 P. M. was 98.4°, and remained so. Recovery uninterrupted.

With the exception of those who died the other cases all presented this same clinical picture. In some of the fatal cases I was obliged to use a spray of hydrogen peroxide in addition to the bichloride to purify the air, on account of the intensely disagreeable odor, but my experience with it as a remedial agent has been so unsatisfactory as compared with the bichloride, that I rarely use it, excepting as a deodorizer. The danger of salivation from the sublimate solution seems to be *nil*, as in a few laryngeal cases I have given as much as the eighth of a grain every two hours in addition to the local use, although in such cases I think the drug should be carefully watched. Nor is there any danger from the patient swallowing the cotton, as in one instance a patient of mine did, owing to the cotton being so carelessly rolled on the holder that it came off in the child's mouth and was swallowed. Even in this case the dose of the bichloride is not excessive. A drachm of the solution only contains one-eighth of a grain, and as the ordinary tuft of cotton used for such purposes will only hold a teaspoonful of the solution, and almost all of this is expressed out of the cotton against the fauces, and expectorated, the amount swallowed is not more than a tonic dose.

The advantages of this method are many, and the rationalè of it appeals very strongly to the judgment.

We all recognize the fact that the diphtheritic germ is not markedly aggressive, and we know that a necessary concomitant to its spread is a proper culture field. By experience we have learned that the throat of a delicate child furnishes a good culture medium, while that of a robust child will fight it off successfully. Therefore, anything that detracts from the value of the throat as a culture medium adds to the natural resisting power of the susceptible child and raises him to the level of the child of stronger constitution, who needs no extraneous aid. This desideratum is obtained when we have a wash which, though deadly to the germ, is practically harmless to the child. Then, by the death of the bacteria, the membrane is limited and the danger of subsequent mechanical obstruction is obviated. In destroying the germ we also cause a cessation in the formation and absorption of the ptomaines, thus lessening the risk of paralysis, septicæmia, heart failure, albuminuria, and all the train of symptoms that follow in the wake of this powerful animal alkaloid. Another advantage is that the treatment is quite as satisfactory in the treatment

of the less serious throat and tonsillar affections. I have found nothing act so rapidly and certainly in simple ulcerative tonsillitis or in the follicular variety, the subjective symptoms in both yielding at once. Then, again, it lessens the chances of the spread of the disease through a house or neighborhood, and reduces to a minimum the danger to the attending physician, as the disinfection is carried out at the very fountain head of the trouble. Instead of hunting the germs in the nooks and crannies of a room, they are attacked in their own citadel.

And still another advantage in this method of treatment is that no time is lost, as the necessary tablets furnish a part of the physician's obstetric armamentarium. It is my practice to at once give the attendant of my patient a tablet, with minute instructions as to how to apply the wash. My experience has taught me that a good method is to make the applications every three hours, and simply to press the cotton against the membrane, thus soaking it. The second or third day the membrane becomes readily detachable, and usually comes away on withdrawing the cotton. Formerly I thought it necessary to rub and tear the membrane loose, but I have never seen any benefit from it, while it is very annoying to the patient. As the patient begins to convalesce I make the intervals of applications six hours, and finally twelve hours apart. While my results have been generally obtained by means of the cotton applicator I can see no reason why the use of the atomizer should be interdicted, although in an unruly child it is almost as difficult to use one method as the other.

In conclusion, I claim for the method that, in competent hands, such as Dr Rennert's, and under the peculiar circumstances in which a perfect check experiment was furnished, such as in my own cases, it has proved a simple and perfectly satisfactory remedial agent, and I beg for it a thorough trial, hoping that it may prove in the hands of others all that I have obtained from it.

The Convalescent Home of the Presbyterian Hospital, at Devon, has been formally opened. It contains accommodations for 200 patients.

MONTHLY BULLETIN OF THE NEW YORK STATE BOARD OF HEALTH.—There were 12,000 deaths reported in March, or 387 daily, which is fifty-three more than in February and thirty more than the daily average for March, 1892. There appears to have been not less than 2,000 deaths more than the normal for the month. The rate of mortality is increased in all parts of the State, and in the rural as well as in the urban portions. Much the largest increase is, however, in the Maritime district, where, allowing for the greater length of the month, there were 1,500 more deaths than in February; of this increase 1,200 is credited to New York city; 6,756 of the 12,000 deaths occurring in New York and Brooklyn.

There is a relative diminution in the zymotic mortality, from 12.45 per cent. of the total mortality in February to 12.12, and there is little change from the recent prevalence of the more important of the diseases of this class; *cerebro-spinal fever*, *whooping cough* and *diarrhœa* have increased their mortality. The number of deaths from acute respiratory diseases has risen from 1,900 in February to almost 3,000, which has been exceeded only in months in which grippe epidemics were at their height. There were 561 more deaths from this cause than in March, 1892, when an epidemic, then waning, caused 1,500 deaths. *Consumption* also had a very large death rate, the number being the same as that of January, 1892. This increase in mortality from diseases of the respiratory organs appears in all the sanitary districts, but is much the most marked in the Maritime. Half of the surplus mortality for the month above the normal is due to lung diseases and the rest is distributed through the other local diseases, those of the nervous, digestive, urinary and circulatory organs. The increase is due to *Epidemic Influenza*, the mortality from which was probably about 1,800. A single case of typhus fever occurred during the month in Peekskill, originating in New York; there was also one death from it in Long Island City. There were seven deaths from scarlet fever in Massenna, St. Lawrence county; in Jamestown there were sixteen deaths from diphtheria.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
MANAGING EDITOR.

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QUARANTINE, CITY OR STATE?

THE Pennsylvania Legislature is now considering the important question of who shall control the quarantine of this port: the city or the state. The important point to the public is, who is best qualified to fulfil the duties of this responsible position? With the dangers of a cholera invasion impending, the vital point is not that of authority or privilege, but that of fitness. Two things are essential to the incumbents: the ability to do the work, and the ability to obtain the support and co-operation of the public. In spite of the unfavorable comments of the public press, our City Board of Health has done its duty, on the whole, as well as could be expected, with the means at its disposal. Newspaper strictures are too often made without any knowledge of the circumstances. The continuance of diphtheria is to be regretted; but if the present laws do not give the Board the authority and the means to suppress the disease, why blame the Board? We have already pointed out the causes for the persistence of diphtheria. They are, first, the neglect of physicians to report cases promptly; second, the delay in abating nuisances, due to red-tape, insufficient powers, and the division of authority between bureaus and departments not directly controlled by one efficient executive head. Dirty streets, and gutters choked with filth, are referred to the courtesy of the Highway department; and before action is taken, the nuisance must be verified by its inspectors, and thus valuable time is spent, when the nuisance ought to be, and could be, abated within twenty-four hours from the first report. The gravest fault of the Health Board lies in allowing such things to be. The state of affairs ought to be laid before councils and before the public, in a way that every one could see the need, and put the blame where it belongs. The all-powerful influence of the public press should be invoked, to secure to the health authorities the means and the power to put this city in a thoroughly hygienic condition, and that at once. And this being done, the Bureau of Public Safety should be held up to a strict accountability for the results. An epidemic of cholera would cost this city countless millions of money. We are able and willing to prevent it; and the public demands the intelligent leadership of its chosen rulers in the work of prevention. The great fault of the Board of Health is that it does not make these demands with the vigor the occasion requires. If the public gets the impression that the members are mainly interested in their friends' affairs, and that the city's welfare is not first in their thoughts, who is responsible for such impressions but the members of the Board themselves? If the Board heedlessly indorses proposed legislation so preposterous that it fails to get a single vote in the legislature, the members must not be surprised if confidence in their judgment is weakened. The legislature is full of men of sound, practical sense; and in deciding this matter they will undoubtedly be ruled by

the question of fitness for the responsibility.

Nevertheless, it would be a mistake to take the quarantine control out of the city's hands. Men are alive to any danger in proportion to its imminence; and while the whole state is endangered by cholera, the city will be the first and the greatest sufferer. The guardians of the portal should not be those residing hundreds of miles from it. Should Philadelphia become affected, a quarantine could not be enforced between her and the rest of the country. The city slums offer the best nidus for the nurture of cholera germs, and these are best supervised by the city officers. The Health office never had a better executive than at present, and the machinery of the department is in existence. All it needs is to be oiled up, some new motive force applied, and a little energy infused into the whole administration. This is easier, more practical and less expensive, than the creation of an entire new commission; unless the latter is one that can work in harmony with the present Board, merely relieving it of some of its outside duties.

"POLITICAL APPOINTMENTS."

SOMETIMES the "besom of reform" sweeps a good man out of place, but more frequently the rotation of office results in a general shaking up that is of incalculable service. Abuses grow imperceptibly; the limitations to which every human mind is subject cause some points to be neglected, while undue prominence is accorded to others. Consequently, when the "new broom" is put to work, it always finds some dust to remove. Even when the previous incumbent has won encomiums for his good work, an able successor will be apt to improve on it in some particulars. The justness of these remarks is well shown by the following account of Dr. Clevenger's work at Kankakee, where he succeeded a man who had won a high reputation for efficiency as a superintendent and an alienist.

[1] "One of the doctor's first acts, after his accession to the superintendency of the Kankakee Hospital, was to make a thorough inspection of the general condition of the 2,143 patients confined therein, and likewise investigate as to what, if any, special lines of treatment had been adopted for the amelioration of physical ailments, both acute and chronic, for in many cases nervous diseases are indirectly attributable and are frequently aggravated through neglected bodily infirmities. The result was surprising. Fifty patients, thus far, have been found suffering from eye troubles; twenty-five with diseased ears, some of them in wretched condition, discharging foul matter, etc. Ten patients have been found, up to the present time, suffering from hernia and various painful ruptures, two hundred and fifty female patients suffering from womb and other pelvic disorders, and numerous other neglected unfortunates suffering from all manner of special complaints; in all, several hundred that could be benefited to a greater or lesser degree by skilled treatment and special attention."

Dr. Clevenger at once arranged with skilled specialists to give their services gratuitously to the patients; while the Illinois Central R. R. has consented to furnish free transportation. Such patients as are able and willing to work are employed on the farm attached to the hospital, comprising eight hundred acres. These and other reforms, already introduced and in contemplation, have fully vindicated Governor Altgeld in his selection of Dr. Clevenger as head of this great hospital.

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[1] Iroquois County Times, May 5, 1893.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

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Bureau of Information,

TIMES AND REGISTER,

1725 ARCH STREET, - Philadelphia, Pa.

A CORRESPONDENT states that in an epidemic of roetheln, now prevailing in Iowa, he finds enlargement of the lymphatic glands at the back of the head and neck, in nearly every case, preceding the fever and rash.

A GERMAN woman is just passing the change of life; strong and healthy always. Two mouths ago her right leg below the knee began to swell, with some pain. She is confined to bed; has contraction of the tendons. There is a hard, putty-like mass in this location, extending from below the knee to just above the ankle and apparently just under the skin, but not exterior to the muscles; in fact, it seems to be muscular tissue which is affected. There is no pain, no tendency to break down, even after the use of poultices for two weeks. I think when I see her again I will strap it. Have you any idea what it is?

WM. L. GILBERT, M. D.

GOODELL, IOWA.

[Phlebitis, or localized spastic paralysis. For the latter, see if it disappears under anesthesia. For phlebitis, apply ung. hydrarg. biniodid., U. S. P., by inunction, daily; and give iodoform, gr. j, thrice daily, internally.—W. F. W.]

EMPYEMA.

I WOULD like to ask your advice in regard to a case of suppurative pleurisy. He had effusion in the pleura at the end of the first week; I tapped him with a trocar and removed over half a gallon of liquid. I tapped him once a week (under strict antisepsis) for five weeks, when suppuration took place. Since then I have been washing out the pleura twice a day with antiseptics, but the suppuration seems to get no better. I have used corrosive sublimate, 1-1000, carbolic acid, at first, 1-60, but finally one part in eight. I also used salicylate sodium and chloride sodium, but all have failed to do much good. The carbolic acid does the best. I used peroxide of hydrogen, but it did no good. To wash out the pleura I use a soft catheter and gum tubing. At present I have the gum tubing connected with a nursing bottle and let the pus run into it, but disconnect the tubing twice daily and wash out as before. The patient is 19 years of age, was an inveterate cigarette smoker, had heart trouble and enlargement of the liver when he was seized with pleurisy. The catheter enters between the fifth and sixth ribs. I was afraid to enter lower on account of the liver. He lies in bed all the time, is reduced almost to skin and bone, and very weak. He has been in bed twelve weeks. If there is anything you can suggest to benefit him, I shall be very grateful. He is taking hydrochloric acid, pepsin and iron as a tonic, and Wampole's tasteless cod liver oil, which contains also quinine, iron, strychnine, wild cherry and syrup of hypophosphites.

M. R. EVANS, M. D.

HUNTINGDON, PA.

[Wash out the pleural cavity thoroughly with Marchand's peroxide of hydrogen, as strong as can be borne, then seal up the orifice with iodoform gauze. If the suppurative germs are completely eradicated there will be no further suppuration. If there is, repeat the washing, and insert a drainage tube, carefully enveloping the end in antiseptic protectives. In the mean time put the hygiene of the sick-room, house and vicinity in order, and ply your patient with good, rich food, beef, eggs, milk, wine, cod liver oil and fresh fruit juices. Lastly give him good, generous doses of iron and quinine, say half drachm of the tincture of iron and two grains of quinine every four hours.—W. F. W.]

Book Notes.

LES MALADIES DES YEUX DANS LEURS RAPPORTS AVEC LA PATHOLOGIE GENERALE. Par le Dr. Emile Berger Lecons Recueillies par le Dr. R. de Saint-Cyr de Montlaur, Revues par le Professeur. Avec 43 Figures Intercalees dans le Texte, Paris. G. Masson, 189m2.

Ophthalmologists need not complain of the want of new books on their speciality; the number has been appalling and

others are still to follow. Any new departure from the beaten tract will be welcomed by the ophthalmic world. The first book on *diseases of the eye in their relation to general diseases* comes to us from Paris, and a most excellent treatise it is. The ocular manifestations of general diseases are noted in every case in which such symptoms become marked. The amount of research which our author has given to this work must have been most tedious, but as a result of his labors, the profession has a book unsurpassed, and which will seldom be consulted in vain. We quote from page 258, on lactation. "Prolonged lactation may cause amblyopia. Gibbon observed the development of amblyopia in a woman after three successive lactations. During the nursing of the third child the amblyopia ended in amaurosis. This woman was very stout. After the weaning of the third child the amaurosis and obesity disappeared. We regret that Gibbon did not examine the fundus of the eye. Jacobson says that a slight optic neuritis may develop during lactation; this neuritis is generally accompanied by small retinal hemorrhages and by a certain disposition to atrophy of the optic nerve. Is this a coincidence? Does not this optic neuritis recognize as its cause, the microbes which are primitively developed in the genital organs? Paresis of the muscle of accommodation has been noticed during lactation, in hypermetropic eyes (Hutchinson). Jacobson says that the paresis of the accommodation is caused by the hyperæsthesia of the nerve centers. Bowman thinks that nursing mothers are predisposed to corneal affections. I can recall Prof. Arlt's lectures, in which he insisted on the connection between lactation and phlyctenular keratitis; he always advised the weaning of the child as treatment. Jacobson has proved choroiditis to be caused by lactation; this choroiditis shows itself by photophobia and opacity of the vitreous body. This disease is generally cured by weaning the child." The book will be read by the general practitioner, neurologist and ophthalmologist, and each one will realize how varied the symptoms of the eyes are and how many different diseases they accompany. The book will shortly appear in English.

In Press.

HERNIA. ITS RADICAL AND TENTATIVE TREATMENT, IN INFANTS, CHILDREN AND ADULTS. By Thomas H. Manley, A. M., M. D., Visiting Surgeon to Harlem Hospital, Consulting Surgeon to the Fordham Hospital, Member of American Medical Association, New York State Medical Association, New York County Medical Association, New York Academy of Medicine, Pathological Society, National Association of Railway Surgeons, etc., etc.

This work is illustrated by sixty-five engravings and drawings, with a full history of the ancient and modern operations for the hernial infirmity of every type, in both sexes, along with a full description of the varied anatomical types of the condition and the multiplicity of technique of modern times. It also embraces an entire chapter on cocaine analgesia as a substitute for pulmonary anæsthesia, with a full and complete set of rules for its indications and technique. Price, $3.00, mailed to any address. Published by the Medical Press Co., Limited, 1725 Arch St., Philadelphia, to which all orders should be addressed.

Society Notes.

NEW YORK ACADEMY OF MEDICINE.—SECTION ON ORTHOPÆDIC SURGERY.

[Stated Meeting, March 17th, 1893.—W. R. Townsend, M. D., *Chairman.*]

"A CARDINAL POINT IN THE MANAGEMENT OF ABSCESS COMPLICATING JOINT DISEASES."

Dr. Henry Ling Taylor read a paper with this title.

DISCUSSION.

Dr. A. B. Judson said the paper was a very temperate, moderate, and complete presentation of the views which he thought were generally accepted by orthopædic practitioners. The views advocated by the author were far removed from the old surgical rule that where pus is present it must be evacuated. There can be no serious objections in certain cases to following the usual surgical practice, yet he believed that our experience as orthopædic surgeons shows that while minor surgical operations do not usually do any harm, they are incapable of doing any good. He was glad

to hear the author emphasize the doctrine of mechanical protection of joints in these cases. Personally, he would lay even greater stress upon protecting the joint from the weight of the body in standing, and from the concussion to which the joint is subjected during walking and running. A distinction should be drawn between the mechanical environment of the joints of the lower and of the upper extremities. An inflammatory focus in the cancellous tissue in the neighborhood of a joint of the lower extremity has but very little chance of effecting spontaneous resolution, while a similar inflammatory focus in the cancellous tissue in the neighborhood of a joint in the upper extremity, being favorably situated mechanically, has theoretically a very good opportunity to undergo spontaneous resolution. He thought indeed, that this really occurred. If we admit, for instance, that hip-joint disease can be cured in the very earliest stage by removing the weight of the body from the joint, then why can we not believe that inflammatory foci may occur in the upper extremity and disappear spontaneously? In no other way can we explain the relative number of hip-joint and shoulder-joint cases.

Dr. L. W. Hubbard said that his experience agreed very closely with that of the author regarding the prevalence of abscess and its relation to the efficiency of the mechanical support applied to the joint. In the New York Orthopædic Dispensary it had been found that abscesses occurred most commonly in those patients who were irregular in their attendance, or in children who are unmanageable. Where abscesses had occurred, if sufficient support can be maintained in a very large percentage the abscesses spontaneously disappear. He emphasized the fact, which was brought out incidentally, that in those cases, especially in hip diseases, where an abscess appears quite early, opens, and discharges, are, as a rule, more favorable, both as to duration and ultimate results, and that they are much more favorable than those in which there is a dry degenerative process, or where the process is slow in development, and then the disease burrows down, causing the formation of sinuses. He had been led to regard the formation of abscesses as not at all an unfavorable symptom in connection with joint lesions. If one cannot control the amount of exercise the patient takes, notwithstanding efficient mechanical treatment, the liability to abscess formation is greater, and its duration is likely to be prolonged. The proper treatment consists in support, protection and surgical rest, which includes not only the rest of the joint, but the avoidance of active muscular exercise. He did not think, as a rule, that operations hastened the cure of the abscess or of the disease. If an abscess interferes with proper mechanical support, or if it be rapidly increasing in size, or burrowing deeply, then, of course, there can be no question about the propriety of operation.

Dr. R. H. Sayre said regarding the effect of suppuration on the ultimate usefulness of a joint, that he thought the joints that suppurate are not more likely to be ankylosed than those in which the disease of the joint runs a long course unattended by suppuration. It is true, of course, that those cases which terminate quickly without suppuration are undoubtedly less serious than those having abscesses, but he had frequently seen disease run a long course attended by suppuration, and an extensive disease of the bone follow, where the ultimate motion of the joints was much better than in the tedious cases without suppuration. For instance, in a child with disease of both hips, on one side there were extensive abscesses reaching down to the knee, which perforated the pelvis and discharged pus through the rectum and through the sinuses about the hip; but in the end, the motion in that hip was very much better than the other side where there had been no suppuration. He had noticed the same thing in quite a number of other cases. It seemed to him that the abscess itself does not necessarily indicate ultimate limitation of motion.

Regarding the question of operating on these cases, he said that if the abscess did not seem to effect the general health he would prefer to leave it alone; but if there were evidence of septic infection and general deterioration of the health, he was in the habit of evacuating the abscess by free incision, if the position of the abscess were favorable, and thor-

oughly scrubbing out the whole abscess cavity with a solution of chloride of zinc of a strength of forty grains to the ounce. He usually obtained primary union in these cases. In cases of tubercular knee-joints, where it is necessary to leave a large gap in the bone after resection, he had employed this same solution with no bad results with regard to the subsequent formation of blood-clot and reproduction of bone. If we could be certain of getting away all the disease, the most rational plan of treatment would be to operate quite early, but as it is so difficult to distinguish between healthy and diseased tissue, and to thoroughly eradicate all of the latter, it was doubtful if much would be gained by such early interference. In the abscesses of Pott's disease, it is not wise to operate except there be symptoms of sepsis, for it is extremely difficult to thoroughly clean out these cavities. Too much stress could hardly be laid upon the necessity of mechanical and operative treatment going hand in hand. Foreign authors who advocate operative measures seem to have for the most part lost sight of the value of mechanical treatment, which is certainly a great mistake. He had undoubtedly seen abscesses disappear under mechanical treatment, and he thought appropriate treatment certainly diminished the number of abscess cases, although a certain number of cases would probably suppurate under any form of treatment.

Dr. C. N. D. Jones agreed in the main with the views presented in the paper, especially endorsing the statement that mechanical fixation is of the first importance. He thought abscess cavities should be freely incised, drained and cleansed whenever possible. In a lumbar abscess which he had occasion to open quite recently, a free incision was made, the cavity curetted, irrigated, a rubber drainage tube passed up as far as the bony sinus, and the rest of the wound closed with sutures. It is now ten days since the operation, and no septic symptoms had yet occurred.

Allusion had been made to the contents of these abscesses, and it had been stated that they did not contain pus, but an emulsion of the products of defective granulation. It is highly probable that pus is in reality the product of defective granulation, for, in inflammation the tissues undergo a retrograde metamorphosis to embryonic tissue, and then break up into protoplasmic bodies, many of which are thrown off as pus corpuscles, while others go to form new tissue.

The chairman said regarding the effect of suppuration on the ultimate usefulness of the joint, that he thought everything depended upon whether the joint itself was destroyed. In watching cases of incision, he had noticed that in some instances, in which before operation there was apparently every indication of extensive destruction of the joint, the joint was found perfectly intact; the abscesses were extensive, and from the symptoms it might have been supposed that excision was necessary, yet by thorough drainage they recovered with useful limbs; in other cases with slight symptoms, the joint was entirely destroyed. Hence, clinically, it is difficult to distinguish the exact limits of the suppurative process. If the joint has become disintegrated, or if osteomyelitis is present, one cannot look for a good ultimate result. In abscess complicating joint disease, he believed mechanical treatment was of the first importance. A case in point was that of a child in which such an abscess about the hip was aspirated and a spice bandage applied, and the child kept in bed for six weeks. It was then allowed to be around in a baby carriage for three or four months, by which time the abscess had disappeared completely. The patient was then allowed on a walking splint, and soon the abscess reappeared, undoubtedly as a result of the traumatism of walking.

Regarding the minor operations, he said he would take exception to what Dr. Judson had said. In one case of Pott's disease, with a large psoas abscess which he watched for a long time, hip disease subsequently developed, and he was firmly convinced that the hip disease was the result of the extension of the abscess from within the pelvis to the tissues about the hip. He thought that if the abscess had been aspirated and kept within the pelvis, the hip disease might have been prevented. In his opinion the more efficient the mechanical treatment, the fewer the abscesses we would find. He was under the impression that

abscesses were not as frequent in hospital cases, and in private practice, where careful mechanical treatment could be secured, as among those who had not received such good care.

Dr. Judson said that at one time the supposition prevailed that the abscesses of joint disease, if allowed to run for a long time, led to visceral degeneration. It was difficult to decide such a question either way from a few isolated cases. His own opinion, based on experience and observation, was to the effect that the degeneration seen in advanced cases of joint disease is to be considered not as the result of suppuration, but as due to the constitutional peculiarity which prolongs the suppurative process and postpones recovery. One reason for this opinion was that many patients are seen with a very extensive suppuration of the joints who still retain excellent general health.

Dr. R. H. Sayre said that when Dr. Judson said that the same constitutional peculiarity which makes the abscess remain unhealed was the cause of the amyloid degeneration, he did not properly interpret the phenomena observed. The reason the abscess continues to discharge is because there is some diseased tissue seeking an exit, and when it has escaped by operation, or by Nature's slower process of suppuration, and the focus has been removed, the sinus closes, and the amyloid disease stops because there is no longer that drain on the system which originally caused it. We have all seen cases of advanced amyloid disease which have recovered after a radical operation. He had not seen amyloid disease in his cases of hip-joint disease recently, probably because they are not allowed to reach that stage so often now as formerly; but many of his father's early cases of excision, where operative interference was refused except as a last resort, presented marked amyloid changes which disappeared subsequent to the operation. Of course, a radical operation does not necessarily stop amyloid changes; the wound may heal up, and the patient subsequently die of nephritis or of an amyloid liver in which the retrograde changes had become so far advanced that they could not be stopped. He thought the early removal of the disease, whether by the surgeon or by nature, was an important and undoubted factor in preventing amyloid changes, and it is rather the removal of the disease in the bone than in the soft parts which is the important factor. He wished to differ from Dr. Judson's remark that while a slight operation might do no harm, it was powerless to do good, and to express the opinion that in certain cases, operative interference was absolutely necessary, and that without it, death was inevitable.

Dr. Taylor, in closing the discussion, said that his aim in writing the paper was to reverse the usual order of things, and describe something upon which most of the members could agree. He considered it quite important that general practitioners and operating surgeons should realize the primary importance of strict mechanical rest of the diseased joint as a means of preventing severe complications of various kinds, and as the most important point in their treatment. This had been very clearly brought out in a recent discussion on Pott's paraplegia, and in a like manner he wished to emphasize its importance in cases of abscesses; and the statement held true in regard to other complications. Those surgeons whose main idea is to strictly protect the joint, will see fewer complications, and such as do occur will pursue a more benign course. Under such circumstances, abscesses may be evacuted with benefit, and other operations are sometimes beneficial, but after all the primary point is the treatment of the focal disease. Most of the abscesses will do well whether operated upon or not; on the contrary, if the joint disease is not properly treated, as is often the case both in hospital and general private practice, these abscesses frequently do very badly, even when treated in accordance with the best antiseptic surgical practice.

The Reedy Island Quarantine Station is being fitted up for service, and according to the contract it is to be ready for service in thirty days. There have been few signs of a development of cholera in Europe. Parts of Russia are afflicted, and with the advent of warm weather it may be developed in Hamburg.

The Medical Digest.

TRIONAL AS A HYPNOTIC.[1]

By Dr. BRIE.

Bonn.

[Assistant physician at the Provincial Insane Asylum.]

TRIONAL appears as a white powder, similar to sulfonal, soluble with difficulty in water of the ordinary temperature, more readily in hot water and quite soluble in alcohol and ether. The watery solution has a very feeble, bitter taste, which, however, was never complained of by patients. From the middle of August to the middle of November we employed among forty-two patients six hundred grammes of trional divided in three hundred and sixty doses of one to three grammes each. It was administered one-half hour before retiring in the form of the fine powder usually dissolved in hot water with addition of cold water. Among the forty-two cases there was only one, mania with marked excitement, in which the patient at first spat out the larger part of the dose, and at times even refused nourishment. Later he took the trional and became more quiet. With this exception the drug was always administered without trouble, even to those who rebelled against opium and other hypnotics.

Comformably to the form of the disease and the nature of the insomnia the cases are best divided into five groups. In the first we have eleven patients suffering from conditions of depression of melancholic or hypochondriacal character, of moderate or severe degree, who, although quiet most of the time, complained chiefly of sleeplessness. In these cases trional always insured a sleep of seven to nine hours duration, usually acting promptly in one-half hour without disagreeable effects, while the patients experienced no disturbances on the following day. In the milder cases one gramme was sufficient, in the more severe, however, it is better to commence with two grammes, because after administration of one gramme the patient wakes too early. After several doses of two grammes had been given with excellent results, one gramme proved sufficient during the subsequent period. One of the patients who for three weeks took continuously one to two grammes trional every night experienced no ill effects, although previously he had suffered from gastric disturbance after several exhibitions three grammes amyl hydrate. I would further mention the case of a hysterical female, who stated that she derived only slight benefit from other hypnotics but always obtained satisfactory sleep from trional. If without her knowledge sulfonal was administered at different times in equal dose her experience was less satisfactory. She also took trional continuously for fourteen days without the disturbance of the general health or the establishment of a habit. A melancholic patient who was brought to the asylum with a severe wound of the neck inflicted with suicidal intent, complained constantly of poor sleep, despite the administration during several weeks of nightly doses of 0.05 to 0.15 opium, his sleep being disturbed by dreams. After administration of 11.2 grammes trional he slept continuously from nine in the evening to six in the morning, and the same good result attended subsequent use of the remedy. Furthermore, we would emphasize here the excellent results manifested in a case of neurasthenia. The patient sought advice at the asylum, especially for his insomnia, which had existed for a number of months and resisted all kinds of remedies. He was given several powders of trional and later reported that he had slept the entire night after two grammes, which had not occurred before for a long time. Later a dose of one gramme acted for a shorter time, but for six or seven hours.

The second group comprises four cases of melancholia with agitation. The patients were all very restless, sighed and lamented day and night. In three cases other methods of treatment had been previously employed; in one case opium had been given continuously for a week, in the second amyl hydrate and later opium had been administered, and in the third, owing to the excessive restlessness, hypodermatic injections of morphine had been resorted to. In all, however, no actually satisfactory results were obtained, and although the patients fre-

[1] Reprinted from the Neurologisches Centralblatt, November 24th, 1892.

quently passed better nights, the rest was sometimes only of short duration. By administration of two grammes trional we secured in two cases immediately good sleep and restfulness maintained during the entire night. Later one gramme gave satisfactory results; the patients stated that they waked up early, but on closer questioning admitted that they had slept from 9 P. M. to 4 A. M., or even longer. In the third case the first dose of two grammes failed to act for a long time, while the second of three grammes and subsequent doses of two grammes had a protracted effect. The fourth patient derived good sleep from the first dose of one gramme; in the two last mentioned, after the sixth administration of the remedy, the patient remained quiet at night for a long period.

In conditions of maniacal excitement, inclusive paralytic mania, the cases of marked restlessness, which caused much disturbance at night, were especially selected to test the efficacy of the remedy. Although we did not always observe positive and full effects in these cases in which other hypnotics frequently left us in the lurch, the results obtained from the use of trional are very noteworthy. That in these conditions doses of two grammes, and more often three grammes, can be readily understood. Among our ten cases, however, only one failure was noted and this occurred in the case of a feeble patient, who after two grammes obtained rest for only a short time; on the following evening, after three grammes, slept until twelve; on several subsequent occasions suffered from vomiting. Owing to the gastric disturbance and because patient afterwards became quiet, trional was not tried further in this case. Whether trional alone or other conditions produced the stomach disturbance cannot be positively answered. Similar after effects were not observed, except in one case. The patient, a young girl, who had frequently received two gramme doses successively with good results, appeared one day drowsy and sleepy, and complained for a short time of nausea. Other patients were still somewhat sleepy on the following day ; some became much more quiet under the trional treatment. Vertigo, ataxia, etc., conditions which frequently follow the administration of sulfonal were never observed. The patients sometimes stated that soon after taking the trional they felt as if intoxicated and could not get quick enough in bed.

I had frequent occasion to compare the effects of trional with those of other hypnotics, especially chloral, paraldehyde, sulfonal and tetronal. I found, however, in cases in which the action of trional appeared not sufficiently intense and protracted, the results obtained from the others seemed in no respect better. The patients slept after administration of three grammes trional at least from 9 P. M. to 3 A. M., that is six hours. I would emphasize the fact that according to my observations, sulfonal and tetronal differ in action from trional in that sulfonal acts more slowly and for a longer time, and often has a cumulative effect, while tetronal frequently acts more rapidly than trional but in its effect is less prolonged. Several patients stated that under use of tetronal they slept only half the night, while trional in the same dose remained effective until the morning.

In the eight cases of the fourth group, where hallucinations formed the prominent symptoms, the patients being excited and sleepless (hallucinatory dementia and paranoia) trional always produced satisfactory sleep. Noteworthy is the case of a woman who had frequently taken successively one or two grammes of trional with good results. After discontinuance of the remedy on the third evening, she received one gramme of sulfonal, and on the fourth day suffered from so much vertigo that she had to be put to bed. Another patient belonging to this group, who for twenty-five days had taken alternately one gramme and two grammes of trional, furnished precise data regarding the duration of his sleep. He stated each time after administration of two grammes that he had slept well, and after administration of one gramme that he slept as well and had waked up earlier, while after discontinuance of the remedy or the use of an indifferent powder he complained of not having slept at all.

In the last group of cases, comprising secondary mental disturbance, dementia senilis, chronic organic diseases of the brain and paresis, sixty-four single doses of trional were administered; chiefly to patients who had been restless

and noisy for several nights. In most of the cases after two grammes rest was secured for the next and following night; the others slept the greater part of the night.

Here, as well as in the other groups, no ill after effects were observed, although the measures recommended for the avoidance of ill after-effects during continuous use of the sulfones (administration of alkaline mineral waters, and, in case of constipation, of remedies increasing intestinal peristalsis and secretion) were not adopted. Single doses should not exceed three grammes. Addiction to the drug never occurs. I have in all our cases administered the remedy dissolved in hot water with addition of cold water. Schaefer and Boettiger have repeatedly obtained as good results from the rectal application as from its use internally.

I would add, I have employed trional in the case of a sane person, who suffered from severe panaritium with lymphangitis and enlargement of the axillary glands, and had not slept for several nights on account of the pains. After administration of two grammes of trional he slept well, waking several times, but immediately falling asleep again. On the other hand, the remedy failed in a few surgical cases (persons recently operated on and suffering from severe pains), in which at my request it was tried by colleagues.

The results of my experience with trional, which coincide with those of other observers, are very favorable. I am inclined to think that it will take the place of sulfonal in cases where a protracted effect is not desired. It will be frequently preferred over all other hypnotics, because it is nearly tasteless, is readily taken and exhibits after effects only rarely, and then in a slight degree. It is indicated in simple agrypnia, as well as in the insomnia attended with restlessness and even marked excitement of persons suffering from physical disorders.

Dean (*Lancet*) employed bromoform in a series of cases of whooping cough, and found the paroxysms ameliorated and the course shortened. In one case, a four-year old girl took by mistake about fifteen minims, and alarming symptoms of narcotism ensued. Hot mustard baths, flagellation, apomorphine and faradism saved her life.

Diagnosis of Apoplexy.—Mills (*Polyclinic*) based the diagnosis of apoplexy on the following points:

1. The sudden fall, with unconsciousness at once, no injury perceptible, face white.

2. Respiration stertorous, noisy, puffing cheeks, tendency to Cheyne-Stokes, interrupted, improved by turning on side.

3. Right face droops more, and right cheek flaps more than the left. Right pupil widely dilated; left contracted. Retinal veins distended. No rotation of head and eyes to one side.

4. Pulse full and slow; temperature subnormal.

5. Convulsive movements noted at first have ceased; both arms and legs drop lifeless equally. Left side was paralyzed first. Sensation almost completely abolished.

The urine was albuminous and loaded with casts; there was aortic regurgitation, and a history of previous paresis and aphasia. The diagnosis was confirmed by the autopsy.

News and Miscellany.

An epidemic of pancreatitis recently prevailed in England.

Tassinari says tobacco smoke is markedly toxic to the bacillus of Asiatic cholera.

At the Pratt Institute, Brooklyn, a course of instruction in laundry work has been opened.

The International Medical Congress, of Rome, has been indefinitely postponed, on account of the spread of cholera.

Dr. Jane Robbins proposes to enlist New York's school children in the sanitary corps; organized for a crusade against nuisances. Dr. Edson approves the suggestion.

Bertillon says the death-rate of married men is six, of bachelors ten, and of wid-

owers twenty-two per 1000. Spinsters die at the rate of eleven, and wives at nine, per 1000.

The wife of Koch, the bacteriologist, has secured a divorce, with alimony to the extent of one-fourth his income. He is to marry a young actress now playing at Barany's theater.

Science ! Where art thou !

Dr. De Boissy, of Havre, France, who distinguished himself during the recent cholera epidemic, completed his one hundredth year the other day, and presided at a dinner given in his honor by the local medical faculty. He ate a hearty meal, made a lively speech thereafter, and in general showed himself one of the most youthful old gentlemen present.

URETHRITIS in the male has been treated by many methods, but Blake (*Hosp. Gazette*) has devised a new one which he thus describes :

"1. Perfect rest in the recumbent posture.

"2. Abstinence from all alcoholic drinks and from meat diet.

"3. Success is so largely a matter of good drainage, that if the meatus be congenitally small or artificially contracted by old hypertrophic urethritis, it should be freely enlarged.

"4. The canal having been rendered aseptic, the patient is put under the influence of cocaine or of ether, and the meatus boldly slit on one side of the mesial line down to the root of the frænum, and if strictures be suspected, a series of sterilized metallic bougies are passed into the urethra. The slitting may be done by means of the galvano-cautery or with Reginald Harrison's most convenient probe-pointed triangular knife, devised for this purpose. At the same time, if the frænum be broad, it should be snipped through to prevent pocketing ; as pockets are apt to form nests of infection.

"No upward cutting nor any sutures are necessary.

"The wound is kept open, and bleeding is arrested by means of a pledget of lint dipped in hazeline, or with Ehrle's styptic wool.

"5. Make a careful search for intra-urethral chancre, and dress it frequently with iodized phenol.

"6. Till the acute purulent stage be passed, keep the penis immersed in some simple germicide solution. A mixture of boric acid and borax answers very well.

"7. Under all ordinary circumstances, avoid direct injections; they are a fruitful source of deep-seated stricture and are most pernicious.

"Use a reflux syringe, such as Reginald Harrison's irrigator, introduce it very slowly indeed, in a rotary fashion, the liquid running all the time to avoid carrying pus back : it should pass well behind the inmost point of tenderness.

"8. Differing cases require different solutions. Ichthyol can be highly recommended, strength twenty grains to one ounce of distilled water.

"9. Never use any organic material in the form of a bougie or catheter when metal can be employed.

"10. Never pass anything into the urethra without sterilizing both the tube and the instrument.

"11. In using a strong solution of cocaine, prepare the patient by giving *two or three grains of quinine*, as severe fainting has followed the employment of solutions above ten per cent. : with this precaution I have used cent. per cent. solution.

"12. All gleets call for patient scrutiny under electric illumination, with air ballooning.

"13. Morning agglutination, shuddering during micturition, and the presence of mucous shreds or 'pennons' in the urine, suggest granulating surface in the urethral mucosa.

"14. Bear in mind the possibility of wart or polypus, the latter very rare ; and of congenital diaphragm, the last, however, is a pathological curiosity.

"15. Sterilize the urine from within.

"By way of prevention, when circumcising the young, slit down the meatus freely, for it is probably more important to do this than to remove the foreskin. According to one of our transatlantic brethren, Dr. Williamson, stenotic meatus is usually present in masturbators."

The difficulty with this method is that it is not radical enough. Why not amputate the offending organ at once, and thus prevent all future attacks ?

The Times and Register.

Vol. XXVI. No. 21. PHILADELPHIA, MAY 27, 1893. Whole No. 768.

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ADDRESS ON HYGIENE.

DELIVERED BY PROF. SAMUEL G. DIXON, M.D.

[At the meeting of the State Medical Society, Williamsport, Pa.]

IT certainly gives me much pleasure to be with you on this occasion. I should, however, have enjoyed the visit more had I been present simply as a listener and not as a speaker.

A few days ago when I came to reflect upon the subject selected by our able president as the one upon which I was to address you, I was not a little perplexed. For me to presume to teach a learned body of medical doctors, such as have here congregated, regarding the most important branch of medical education, would be unpardonable. I can, therefore, only hope by chance to refresh your memories upon a few points in sanitary science. As a teacher of medical students I have seen fit to divide the subject into *Personal*, *General* and *Public Hygiene*.

Including under *Personal Hygiene:*—Inheritance; hygiene of various periods of life; prevention of mental, moral and emotional diseases; prevention of sexual diseases; hygiene of clothing; hygiene of occupation, etc.

Under *General Hygiene*.—Hygiene of foods: Practical dietetics; food adulterations, food decompositions; accessory foods, etc., stimulants and narcotics, (intemperance).

Hygiene of water: Water supply; potable water; balneology.

Hygiene of dwellings: Air; lighting; heating and ventilation; plumbing; drainage and sewerage.

Location and soil: Ground air; ground water; soil pollution.

Climatology; medical meterology; animal parasites, (examination of meats, etc.); vegetable parasites, (bacteria).

Public Hygiene.—Infectious diseases; school hygiene; quarantine—means of combating disease; disinfection; hygiene of hospitals, prisons, etc.; vital statistics; legislation of public measures; vaccination, etc.; disposal of the dead.

This scheme may appear too comprehensive for a student of medicine under our present short graded courses of three years, yet, as it is not in the least too general, I would be pleased to see it introduced into the curriculum of every medical

teaching institution of our Keystone State, and at the same time to have its standard well protected by a learned State Board of Medical Examiners. However much I may advocate this standard in our medical schools, I can assure you that my address to you will be exceedingly short. I will not presume to air my own erudition in a comprehensive lecture on sanitary medicine, as I feel sure it would be at the expense of others who are here, I have no doubt, to teach us that which has not heretofore been known to the medical profession. To avoid inflicting tediousness upon you, my fellow members of the State Medical Society of Pennsylvania, and for brevity's sake, I will merely attempt to refresh your memories upon a sub-division of my comprehensive scheme of preventive medicine, which will be *Air*. In considering the importance of this element to sanitary science we must recognize that man's surroundings are and ever will be impregnated with minute life which will, when brought in relationship with a favorable nidus, at least direct either functional or comparatively harmless pathological conditions into maladies which nature may neither exist under or overcome. Again it would appear, so far as we can determine from artificial experimentation, that this micro-organic life can *per se* when introduced into healthy tissues disturb the normal affinities of the animal economy. This being admitted, we must accept the situation and prepare ourselves for war with this minute life by first building up healthy, vigorous tissues, for, the instant we permit them to drift from a normal condition they at once offer a nidus where pathogenic organisms may feed, grow, reproduce and form toxic substances which will so disturb the higher animal organic life as to cause dissolution. To grow tissues sufficiently vigorous to destroy these germs of disease as they enter the body under ordinary circumstances, we will be compelled to call to our assistance each and every hygienic measure known to man. We must enforce proper mental and moral training, suitable clothing, occupation, diet, bathing, sanitary dwellings, urban parks, proper food, vaccination, and above any other one element, *pure air*. However, as I have already stated that I do not intend taking advantage of the privilege granted me by this society, I must and will confine myself to the factor that above all others takes a high position in governing health and disease, and at the same time the one most frequently lost sight of by both layman and physician. The high place I give air as a sanitary factor may be severely criticised, for I do not know of any means by which we can measure the influence of isolated factors in favor of and antagonistic to the health of animal life. I will, however, for my purpose on this occasion, venture to place air on a high plane, as our whole vital process is dependent upon this element. To appreciate the importance of this, the chief factor of organic existence in relation to both health and disease, we must ever keep before us, in at least a superficial way, the physiological processes dependent upon this mechanical mixture. Animal life demands air through the organs of respiration and transpiration, from the very moment it obtains an independent existence, until the last act of life is performed. Parkes very truly states that starvation is a matter of days without solids, hours without liquids, but of minutes without air. We must ever bear in mind, that the air a strong man takes into his lungs supplies oxygen to 443,520 ounces of blood every twenty-four hours, providing the mechanical mixture must be made up of 20.96 per cent. of oxygen, 79 per cent. nitrogen and .04 per cent. carbon dioxide. To obtain a full supply of oxygen for the tissues through the red blood corpuscles, *all* the physiological functions of respiration must be in health, for this reason we cannot entirely overcome inherited inconsistencies. If there is any reduction in the required amount of this important constituent of the atmosphere, just to that degree of loss do the animal functions of the body become impaired and the moment there is an entire cessation of the supply of oxygen, life immediately goes out. It would seem that the nervous system first feels its loss, then the the heart, the brain and digestive system, etc., all become sluggish in their respective functions, the results of which are reflected upon every cell and fluid in the animal body. Physiological combus-

tion is interfered with, and consequently the required chemical changes necessary for health do not take place. The blood is loaded with debris and is thereby rendered unable to take up the waste of the tissues, but leaves it as foreign matter to undergo chemical changes and form poisons.

Consumption of the lungs is always to be found in great excess, both in man and the lower animals, who live in such environments as compel the breathing of devitalized air, producing sluggishness of physiological action. It is under this condition that the digestive secretions are impaired, and the general physiological combustion reduced so that the body becomes a habitat for germs called pathological micro-organisms, and they, with their respective methods of digestive processes, effect a breaking up of the already weakened affinity of the molecules forming the cells and tissues, and in some way or other, these organic chemical substances are toxic to animal life. The powerful effect of repeated infinitesimal quantities of these poisons, which are often albumoses, is beyond our present knowledge, yet, we have good reason to believe that they cause many chronic changes that insidiously creep upon us, while large doses of them cause death almost immediately. For instance, the subcutaneous infection of blood taken from an animal with uræmia produces uræmia in the recipient, or the prevention of their elimination through the excretory organs will also produce the same result. Gautier, and many others, have thoroughly demonstrated that animal tissues in process of putrefaction and decomposition, invariably elaborate certain alkaloids of very powerful toxetic properties. To-day we know that these toxic albumens are also formed during the life of the animal tissues, and are called leucomaines; any excess of the production of such substances in the animal economy, even in most minute quantities would certainly be very dangerous to health, were it not for the eliminating organs. This is demonstrated by an instance just cited in which the kidneys were ligated, and the animal thus affected soon died with symptoms indicating a malady that has received the misnomer of uræmia. The production of the waste is in reality a feature of life. Dr. A. M. Brown very properly said, "Life is a contingent phenomenon consisting of partial births and deaths." "In the midst of life we are in death," for scientifically speaking, it must be admitted that the living body always bears with it the components of the dead one. Life only goes on as long as the organic and inorganic work together, and to carry on its functions consistently with health the normal quantity of oxygen must be furnished the blood in order to form *normal* waste. The dissimilation that results from over-loading the system with debris because of the blood being deficient in its carrying powers, often results in the production of leucomaines. Impure air often contains these toxic alkaloids that I have said are produced outside of the living tissues, and can be taken into the body through respiration.

The decaying organic matter in the air of a Russian hut in the spring time, after it has been occupied all winter, will, with many people, bring on nervousness, indigestion and diarrhœa, and sometimes typhus fever, either directly or through the agency of minute life. I am convinced from my investigations that no one living in a normal atmosphere, performing that sort of physical exercise calculated to pump a normal quantity of air into the lungs, would likely become a victim to typhus fever. Let it be a reproductive poison or not, it is, I have no doubt, caused by impure air, which not only supplies toxics formed outside the body, but also permits them to form in the tissues. If our people had a bountiful supply of pure air furnished to the lungs, we would all, even we bacteriologists, attach less importance to the disease-effecting and disease-producing micro-organisms. On the principle of resistance, man must protect himself against the deadly work of micro-organisms. We cannot directly exterminate them outside the animal body, or as yet see our way clear to overcome their pathogenic characters. If they once gain entrance and establish themselves in their human abodes, it is a most difficult task to successfully battle against their action upon the tissues without overcoming the animal economy. For this reason, there-

fore, we must, as I have said, supply the body with its required quantity of oxygen to keep up the highest degree of vitality in every member. Otherwise the secreting and excreting organs will cease to do their full quota of work and the tissues will not continue to undergo that constant regeneration that is necessary for health, otherwise the blood can neither carry nourishment to the respective organs nor in turn convey the debris to the eliminating viscera. The importance of pure air for the health of man must be apparent to us all from the fact that the very environment in which the animal kingdom has been evolved is most constant in its supply of this mechanical mixture of oxygen, nitrogen, and carbon dioxide, as they are the constituents of the very element that has permitted the present development of man and the lower animals. Without it we are *a priori* infected by the formation of leucomaines which would otherwise be prevented by normal physiological combustion. I believe we often find an example of the want of a normal elimination of debris in children living in cities. A child, particularly one with insufficient chest expansion, that has been taking considerable physical exercise in a badly ventilated room, will frequently suffer toward evening with what we call growing pains, and at times with a slight rise in temperature, while the *same child,* when submitted to like exercise in country air, where it can obtain sufficient oxygen, will not be subject to the same painful affection. In such cases it is quite probable that the trouble is brought about by the inability of the blood to furnish enough oxygen to the tissues and to carry away the debris, and if this condition is carried on continuously for some weeks, we will have a continued fever due, in all probability, to the formation of leucomaines, or to catarrh of the digestive tract. The physiological process of life not only demands the formation of natural tissues, but also of *normal waste* and the moment the eliminating organs are called upon to battle with foreign matter, their scope of power is limited and the tissues irritated, as for instance, when the kidneys are loaded with uric acid crystals, the results of which we are perfectly familiar with. This condition can be overcome if we have both healthy lungs and nervous system, the latter to transmit normal impulses to the respiratory muscles and thus furnish the blood with pure air to bring about natural physiological combustion. You may limit your patient's diet to non-nitrogenous food stuff, you may wash him out with the free administration of water and you may drug him with any or all the remedies known to the medical profession that have any relation to a gouty diathesis, and find your treatment of little or no avail, unless you have the patient exercise in fresh air. Perfect oxydation of the food is the prevention and cure for gout. The changes effected by the artifice of man in the normal uniformity of the composition of the atmosphere is too significant a fact for us to lose sight of when considering a means for the preservation of health and the cure of disease. Pure air breaks up organic matter and renders it both harmless and also useful to each and every form of life that has been evolved in its midst. Without its chemical action upon inanimate matter, heat and energy would not be produced and the world would be without animate things. It creates and supports life; therefore, the moment we overload it with impurities, that moment we interfere with its power to maintain health. Yet owing to man's present want of appreciation of the necessity of maintaining the purity of this mechanical mixture for health, I have never found in his habitations an approach to purity in this great life-supporting element. It is mostly deficient in oxygen, which is replaced by carbon dioxide and carbon monoxide, toxic, non-toxic organic, inorganic matter and frequently by pathogenic micro-organisms.

The carbon dioxide is, of course, the least harmful; it being within itself only a negative poison. We do not now believe that the 123 persons that died out of the 146 confined for one night in the Black Hole of Calcutta, nor that the 70 passengers who died out of the 150 that were fastened in the cabin of the steamer Londonderry with the hatches battoned down during a rough night in the year 1848, were killed by asphyxiation from carbon dioxide, but that they perished from the animal alkaloids formed out of

the organic debris exhaled by the lungs and skin into an atmosphere deficient in that great purifier—oxygen. Organic matter is also taken into our buildings by soil air, our boots, and in large towns and cities by the very air we are compelled to circulate through our dwellings as the nearest substitute obtainable for nature's atmosphere. The air of Philadelphia this month is so laden with filthy organic matter raised from the dirty alleys, (I say alleys, because they are not worthy the title of streets), that when the sun's rays strike them as suspended in the atmosphere of a room slightly agitated, you instinctively hold your breath. Not only is this air loaded with filth that undergoes a chemical change and forms compound poison when retained in rooms deprived of sunlight, and deficient in oxygen, but we have also sub-soil air that circulates through earth foul with the sewage that leaks through the open walls of our conduits. The soil through which this air passes is so polluted with sewage that when brought to the surface you can smell it, with a modern wind some 1000 feet away; this is the condition of the air that circulates through our cellar walls in Philadelphia, the average stone of which they are built containing nearly 50 per cent of air, which is constantly interchanging with the surrounding amosphere. Again, a large proportion of the floors of the hot air chambers of our heating furnaces are built of porous earth. What is the effect of this condition of affairs? Why, the air in the hot air chamber is lighter than the filthy subsoil and out door air, therefore, the heavier outside column forces the poisonous sub-soil air up through the floor of your hot air chamber, filling the space with polluted air; this in turn becomes lighter and is forced through the hot air flues into the living rooms to feed the occupants, and we wonder why we are not typical specimens of the genus homo. During the early part of this century, Philadelphians were not satisfied with the cess pool and sewage filth they could take into their bodies through the air. The cess pools and sewers were built with what is called dry walls; they are walls constructed simply of brick, with open interspaces. The object was to permit the percolation of the effluent through into the surrounding sub-soil. The idea being that mother earth was a great and inexhaustible purifier; this, however, was too complimentary, her power was limited and the sub-soil soon became surcharged with filth and through this polluted ground they deliberately laid wooden conduits for water carriers, which in certain strata of earth soon decayed and became very porous, in fact so much so that disease-effecting and disease-producing micro-organisms would pass through their walls into the stream of water, on its way to the drinking tap in the houses of our ancestors. If this condition of affairs existed at present, we might be even more apprehensive than we are of the threatening cholera epidemic.

Another substitute for the oxygen that our house air frequently contains is, as I have already mentioned, carbon monoxide. This gas is a direct and deadly poison, one per cent. of which in a confined atmosphere, will unite with the hæmoglobin and deprive the red blood corpuscles of their power to carry oxygen to the tissues, in consequence of which, the nerve centres fail to respond to stimulation and death ensues. The usual sources of this gas, which I believe to be one of the great pre-disposing causes of early decay of our faculties, is the combustion of the substances used for producing heat in buildings for the various purposes of man. It is non-odorous and will pass out through cast iron, when sulphurous acid gas, which, when present, acts as a tell tale, will not escape. Hot air furnaces and stoves for the burning of coal are fertile sources of this poison. Yet, our city fathers in Philadelphia were not satisfied with the small volumes of this insidious poison produced and permitted to escape into the air of our buildings from this source, they therefore introduced water gas into our mains. This gas must contain at *least* thirty-five per cent. of carbon mon-oxide, and at the same time has a solvent power on a residuary substance that has been deposited in our old pipes, from coal gas which prevented leakage; consequently during the last year our houses have been deluged with this health destroyer. There is no doubt in my mind, but, that much of the so-called diphtheria in Philadelphia last winter, was a tonsilitus

caused by water gas poisoning. Our people, however, because they are furnished with a better illumination by this gas, which is richly charged with carbonaceous material, go on electing to office those who are, through ignorance, poisoning our bodies, and at the same time burdening us with as heavy a tax as the English laid upon our colonial ancestors, by charging for this poisonous gas about three times the cost of its production. Deficiency in oxygen and the excess of carbon dioxide and the additions of carbon mon-oxide and organic matter in the air of buildings occupied by man and the domestic animals, undoubtedly play a most important part in the ætiology of all pathological processes, yet, their injury comes so slowly and continuously that man does not fully realize the presence of the enemy until too late. The people's medical advisers do, however, realize this condition, and also the importance of pure air to maintain health and to overcome pathological processes; therefore it behooves our profession to teach the people, particularly the law makers of our land, the necessity of having this element, with which nature has so bountifully supplied the organic kingdom, kept pure. Each physician should insist upon his patients refusing to endorse any candidate for public office, unless he gives a pledge that he will exert himself to have laws made and enforced to bring about a higher degree of health. It is as important to compel our people to have properly ventilated and lighted houses, as it is to have sanitary plumbing, which latter our laws require. As physicians, we forget the scope of our power, and neglect our moral and professional duties. It is incumbent upon us to instruct our patients how to preserve health, and thereby improve the moral, religious and political standard of this, the greatest nation of modern times.

Ill health is the parent of much that is bad in civilized life, and it lies in our power more than it does in those devoting their lives to the professions of law and theology, to advance the moral condition of our people. There is not a man, woman or child in this great state, that is without a physician. He is thrown into the most intimate relationships with his patient, and by teaching the proper laws of hygiene, he can greatly reduce murder, suicide, drunkenness and family feuds. If this be so, why are we not doing our duty? The answer must be that sanitary medicine is not attractive; in fact, many of its details are naturally repulsive and not profitable to him, and therefore the physician shuns it in his private capacity, and this is wherein he fails, for it is not as a reformer, a legislator, or a scientist, but as a family physician that his great power for good in this direction lies. It is in this role that the doctor of the present day is at fault; he does exert himself to legislate, to exhort his fellow physicians, but as the familiar family doctor he fails to take advantage of his power to exert a moral influence over his fellow man. The great physician must bridge over the wide gap between science in the abstract and medicine as it should be practiced in every day life. Without a moral influence over his patients, he cannot reflect the full power of his scientific knowledge.

In no other profession is the adviser brought into such intimate relationship with his fellow creatures when they are susceptible to advice, unless it be the spiritual adviser, whose duties too often come when the life in question is about to be closed. At the word of the physician families separate for years, men give up their trades and vocations. Their domiciles are moved to higher elevations, or to the seashore. Therefore, if we have it in our power to bring about such radical changes as these in the habits of our patients, why is it that our homes, factories, mills, vehicles, hospitals, places of amusement, etc., etc., are so poorly supplied with pure air? Again, why is it that our cities in this great state are permitted to be built up so closely? Where are our urban parks, gardens and play grounds, which are necessary to keep up the average standard vitality of this great nation? I say nation, because it is made up of individual men and women, its power being simply the sum total of the force of the individuals, that go to make it up, and the more thickly the inhabitants are settled the lower is the degree of health. It has been said that all things being equal the health of a population is in inverse ratio to its density.

The only way to overcome this rapidly increasing evil of huddling together is by opening to the people, public gardens and open spaces and wide boulevards. A wide avenue is now proposed in Philadelphia, which would not only give the city, as it were, a new link, but it would make a short and attractive walk and drive to the greatest city park in the civilized world. I have heard it spoken of as an ornamental luxury, but I believe it is a crying sanitary necessity, which if once demonstrated to our lay people by its physical opening would in a short time be followed by a request to the authorities for others of a similar nature. Outside of a better sewage system and a mechanical filtration of Schuylkill water, I know of no other more crying need in that great city of our State, than air spaces and vegetation.

The way in which our towns are being closely built up is disgraceful to our city fathers and reflects somewhat upon the medical profession. Too many poorly ventilated public school houses are, at present, being erected on contracted spaces, without any gardens or play grounds, where the brains of the present generation are overworked and the body starved and poisoned for want of pure air and physical exercise. To pass one of our public school houses in Philadelphia at noon and see the pale-faced children playing on the damp brick pavements between two high walls, shutting out the rays of the glorious sun, makes one blush with shame for the ignorance of our people. While to enter many of our school houses during session, soon benumbs one's brain. During the last winter young girls in our Normal school fainted away for the want of oxygen. The remedy for this deplorable condition of things is largely in the power of the medical profession. If each doctor in this community would teach his patients the importance of pure air, there would be such a universal demand that those holding public office would be compelled to grant us better ventilation in public and private buildings, give us wider streets, more small gardens, less water gas, better sewage, cleaner streets, and less smoke and lower buildings, which latter would permit of the sun's rays striking to foundations of the buildings on at least one side of the streets. The recent structures in the large cities in this country are monuments of ignorance of our people, that our descendants will censure us for in time not far off. Our streets will soon be but caverns such as the half civilized man lived in centuries ago, mere fissures between great walls of stone and bricks, damp, sunless and dirty, a *sine qua non* for disease germs. Less steam from the factories, locomotives and engines should be demanded. These improvements would lead to a decrease in the mortality of youth, crime, drunkenness and immorality, and to a marked raising of our standard of mental power.

To-day it is a crying shame to our intelligent classes to analyze the air in our medical teaching institutions. Only a few years ago Dr. Kerlin made a series of important examinations of the hygienic conditions of the air in the lecture rooms of Medical Hall of the University of Pennsylvania, with the result of showing 17 per cent. of our index of impurities, or in other words, the carbon dioxide raised from four parts in 10,000 to seventeen parts in 10,000. While six parts in 10,000 represents the maximum of impurities in ordinarily well ventilated rooms, seven in 10,000 is detectable by by the sense of smell.

In studying the ætiology of disease, we must not permit ourselves to be persuaded that bacteriology has given us *Le not d' enigme.* Micro-organisms undoubtedly have the power, when introduced into the circulation of healthy animals, of producing certain diseases. Yet I feel convinced that in tuberculosis, and many other germ diseases, that they, in a large majority of instances, only change an already unhealthy condition into one definitely and fatally morbid. Normal tissues supplied with pure air, have great power to resist germs taken into the body through either the digestive or respiratory tracts. This conclusion is reached from the fact, that I found guinea pigs and rabbits yielded much more readily to inoculations by tubercle bacilli when confined in cages, kept in the cellar under my city labratory, than they did when kept in my animal house situate in the country and so arranged as to have a large volume of pure air circulating

through it both day and night. To avoid tuberculosis, we must recognize the predisposed habit of the individual and have him live in pure air, and not breathe a deoxidized atmosphere, or air loaded with fibrous matter or spiculated dust, or air impregnated with the products of combustion of coal, or the escape of water gas, or a high percentage of humidity, or air that has been robbed of the sun's rays. This last is not the least important, it not only prevents dampness, but destroys poisons, such for instance, as the woorara snake poison and bacteria. If such environments are not avoided, a lower and lower vitality will creep on insidiously, inch by inch, until a pathological condition becomes recognizable both to the victim and his medical adviser. At this stage, if not before, a nidus has been formed which is quite susceptible to the action of pathogenic minute life, and should the patient not be removed from the environment that predisposed him to the attack of the germs, his resisting powers will be still further reduced It may, however, be discovered early enough to not only prevent a greater degree of susceptibility, but by proper hygienic conditions, the tissues in many cases will return to that degree of health not suited to the lives of micro-organisms.

I do not mean to undertake to weigh the exact power of germs to break up the affinity of normal tissues, when brought into contact with them in what we may call the natural way, to differentiate it from an artificial method. I do intend, however, to say that we can maintain by the aid of pure air and proper physical exercise the integrity of animal function to a degree that renders the tissues almost impregnable to the attack of micro-organisms. We must girdle ourselves with an armor of general good health if we wish to resist the attacks of minute life. The prevention of premature death, disabled physical and mental faculties, forms a far more comprehensive question for the physician than does curative medicine, at the same time we must recognize that preventive and curative medicine are inseparable. While we are gathered together in convention, we all advocate hygienic measures, admitting them to be paramount to the more fruitless task of the so-called curative side of medicine, yet, I fear we are in preventive medicine too much like many of our Sunday christians, who believe in the theory, yet, forget its practical workings by the time the business houses of Monday morning open for trade. The physician of to-day who has been taught and believes in preventive medicine, too often empirically accepts disease as an existing condition and treats it accordingly until alleviated or cured. This stage reached, he considers his work done until called in again, upon his patient becoming ill, probably with the accumulation of the evils of impure air and other unhygienic habits. This may be pecuniarily profitable to the medical man, and might warrant the ignorant to attribute our laches regarding prevention to be entirely toward that selfish end. This, however, would be very unjust. We must account for the customary neglect of hygiene by the fact that both preventive and curative medicine were hidden in darkness for thousands of years, and, therefore, the conservative, cautious and wise physician, with a full realization of his ignorance, only interfered with nature when stimulated to act by the appeals of an acute sufferer, thence the habit. To-day this should not be so, we do not regard disease as a visitation of the Almighty God, inscrutable in character. We sufficiently understand many of the predisposing and exciting causes to guide our fellow man through life free from the heretofore unknown poisons, to a much more satisfactory degree than some of our forefathers, who believed themselves capable of curbing the wrath of God by the administration of their empirical remedies. This good fortune of ours, however, comes to us from the fact that in all ages of medicine our profession has been besprinkled with ambitious minds, who have labored to discover the cause of ill health and methods to prevent disease, and now the time has arrived for us to come to a full realization of what has been demonstrated regarding man's power to prevent disease and adopt as our motto *venienti occurite morbo.* Hasten to meet the coming disease. Those factors essential for prevention oftentimes prove

essential for cure—which fact is not recognized by many of our practitioners. For instance, we frequently know of a physician who is called in to see a patient; he correctly diagnoses the case as one of typhoid fever, and then simply applies his knowledge of the healing art. Oftentimes with as little success as if he had been administering to a person with symptoms of lead poisoning, who was at the same time continuing the use of water impregnated with the poison. He seldom interests himself to investigate and remove the source of poison, but frequently orders the patient on a milk diet, the very vehicle that first carried the poison. I conceive it, however, to be our duty to at once investigate the water, food and air supplies and thereby cut off all external source of further poisoning.

The healing art and preventive science are a part and parcel of each other. The cure of disease must be imbued with a preventive element. Scurvy certainly demonstrates this assertion to be true, as in the treatment of this pathological condition we see the cure emerges directly and exclusively from the preventive treatment, and I have no doubt that as our knowledge increases, this principle of physiological treatment, as opposed to complicated and disturbing drugs, will be more clearly recognized.

If some move is not accomplished ere long, to establish better hygienic conditions, and our people taught to appreciate that education of the body is almost of equal value to culture of the mind, the bodies of our people will be starved, and the normal brain become morbid. The now great American nation will be forced to take a second place regarding health, ability and morality, while she will rank high in immorality.

It is a sad mistake, to centralize our attention upon the cultivation of the brain as if it were a separate organism, entirely independent of the physical body, and it depends upon our profession to form a public opinion favorable to the supply of pure air and physical exercise, particularly to the poorer classes, and this I exhort you to, as nothing else will maintain the high standard in our future generations that has been handed down to us by our forefathers.

Fellow physicians, upon reform in sanitary matters depends the future of this promising nation. Our Government has its Secretary of State, of the Navy, of War, of Agriculture, of the Treasury, while the richest treasure of all to mankind, health, is absolutely ignored. Why do we not have a Secretary of Health? This is a disgrace to us as a people, and indirectly a reflection upon our profession, for we undoubtedly have it in our power, if we would insist on our patients and their families paying more attention to sanitary matters.

Knowing, as a physician does, how important health is to human greatness and happiness, our efforts cannot be too great to maintain it. The present year is one of more than usual importance with the dire disease, cholera, close to our shores. Yet, with the individual exertion of each physician in this State to maintain cleanliness and to stimulate those trusted with quarantine, we should not only prevent the entrance and spread of this disease, but faced by such an enemy, the legislators would be reminded of the vast importance of a good code of sanitary laws, and vote liberal appropriations for the execution of the same.

The following words of the late Dr. Richardson should be ever kept in mind:

"Cleanliness covers the whole field of sanitary labor. Cleanliness, that is purity of air; cleanliness, that is purity of water; cleanliness, in and around the house; cleanliness of persons; cleanliness of dress; cleanliness of food and feeding; cleanliness in work; cleanliness in habits of the individual man and woman; cleanliness of life and conversation; purity of life, temperance, all these are in man's power."

"How small of all that human hearts endure,
That part which laws of kings can cause or cure,
Still to ourselves in every place consigned,
Our own felicity, we make or find."

The Medico-Chirurgical Hospital has every room occupied and a number of patients waiting for accommodations. Steps are being taken to increase the number of private rooms. It is not two years since the hospital opened with the number of its beds doubled.

THE NECESSITY FOR THE EARLY RECOGNITION AND TREATMENT OF SUPPURATIVE DISEASES OF THE TYMPANUM, AND THEIR RELATION TO CEREBRAL COMPLICATIONS.[1]

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IN bringing the subject of this paper before you this evening it is with the hope that one of the many urgent subjects of otology may be so clearly presented, in connection with the discussion which follows, as to deeply impress the busy practitioner with the importance of the early recognition and treatment of aural diseases in general.

We think it is an admitted fact that of all human ailments diseases of the ear have been most neglected.

From the early days of medicine to the present time aural diseases have largely fallen into the hands of cunning quacks, who, through their hocus-pocus methods, have mystified the always gullible public. In fact, the science of otology has been reduced almost to the primitive teachings of the dark ages, when it was declared by the expounders of ancient wisdom that urine of the male and female, respectively, would cure ear diseases in the opposite sex, and that inflammatory conditions of the ear might be alleviated by one of their pharmaceutical specialties, composed of "the delicate admixture of the excrement of pigeons and the ashes of horses' dung, to which might be added finely pulverized black pepper."

Judging from the statements of patients, there still exists among some of the profession a belief, which is largely shared by the laity, that something mysterious or magical surrounds the diseases of the ear and their treatment. With this opinion prevalent we cannot express surprise at many of the unfortunate sufferers volunteering the information that they had been advised to "*Let well enough alone;*" "*it is bad to meddle with the ears;*" "*do not tamper;*" "*never heal a running ear or it will go to the brain and kill you.*"

It is also of daily occurrence to find that the syringe has been roughly used to throw a stream of water on an *exposed drumhead*, or that the popular but uncleanly habit has been suggested and followed of dropping greasy and other fungus-generating fluids into the ears.

This evident lack of information is, of course, due to the fact that in former years in many of our medical colleges otology had received only the minimum consideration, while in some institutions this most important branch of medicine had not even been mentioned in their curriculum. So long as students are not required to pass an examination on aural or other diseases, it will be found that their knowledge of the same is almost *nil*.

It is indeed gratifying to be able to note the increasing interest and demand for special instruction on the ear and its diseases. To the recent graduate in medicine a knowledge of this branch now becomes imperative, as many of the State Examining Boards require applicants to pass an examination on otology.

From a medico-legal standpoint the subject is of the utmost importance, for certainly the time is not far distant when it will be regarded as illegal for one to so neglect a suppurative disease of the tympanum (either acute or chronic) that fatal cerebral complications result therefrom. Brain abscess and meningitis, as the result of ear diseases, are in the great majority of cases preventable. It, therefore, becomes the imperative duty of every practitioner of medicine to properly diagnose and treat such cases. This duty is especially important to the physician of general practice, inasmuch as he is usually the first to be consulted, and his direction and care of the patient at that critical time is often of vital importance.

In order to give an idea of the importance of ear diseases in their relation to general medicine and the responsibility and duty of the profession at large to the public, it will be interesting to note that it has been estimated by various authors that from forty-three to seventy-six per cent. of all brain abscesses arise, either directly or indirectly, from suppurative disease of the middle ear. To this I should like to add that the same figures would probably not exaggerate the large number of cases of meningitis and py-

[1] Read before the Philadelphia County Medical Society, April 26, 1893.

æmia, which, on account of their doubtful etiology, are termed and accepted as "obscure." Barker, as quoted by Keen and White, estimates that not far from two thousand deaths, caused by diseases of the ear, annually occur in Great Britain, with a population of little more than one-half that of the United States.

These are, indeed, impressive figures, and are especially deserving of serious consideration, from the fact that there are annually dying in the United States probably four thousand of her inhabitants from brain abscess, the direct cause of which is some pathological change in the ear. Our belief is that should these cases receive early recognition and care the mortality, at least, would be greatly reduced and the fatal complications in most cases be prevented.

As a rule, an acute inflammation of the tympanum is painful in the extreme ; and yet it must not be forgotten that we will at times find a case where the membrana tympani will rupture with the consequent flow of discharge, which will be the first and only symptom to attack the patient's attention. These cases, however, yield promptly to treatment, unless dependent upon some enfeebled condition of the constitution. On account of the symptoms not being urgent they attract but little or no attention, and, therefore, are allowed to form a good foundation for a chronic purulent suppuration with all its possible serious consequences.

An acute suppurative otitis media is usually the result of the acute non-suppurative variety (commonly known as earache) the symptoms of which briefly are, a sense of fullness in the head, accompanied by more or less tinnitus and so-called "neuralgia." In my experience these symptoms precede the real pain several hours, or in some cases it may be several days. The pain, which is very severe, generally occurs at night, and is referred to the ear and along the Eustachian tube. In most cases considerable fever is present, and marked impairment of hearing. As the pus accumulates the bulging outward of the membrana tympani correspondingly increases, and the tension resulting therefrom intensifies the pain almost beyond endurance. It is in this state or stage of the disease that immediate relief is so earnestly demanded for the present and future welfare of the unfortunate sufferer.

Should the patient have the good fortune to have the distended drum promptly punctured in order to promote the free escape of pus, and this followed by gentle inflation through the Eustachian tube, together with general antiseptic care and the use of leeches, the hearing will in most instances be quickly recovered, the discharge will cease, and all the functions of the organ will soon be re-established.

If, however, the pus is not promptly evacuated the patient is in imminent danger of one or more of the serious consequences that follow such neglect. Should the drum be so thickened and bound down by adhesions as to enable it to resist the pressure, as is sometimes the case, the pus will then, by one of the several means of communication, produce a septic inflammation of the brain or its coverings, which usually has the result of a prompt fatal issue. Or the pus may communicate with the mastoid antrum, thence to the mastoid cells, thereby subjecting the patient to all the serious, and oftimes fatal, complications of such a condition.

Fortunately, however, these implications are not of frequent occurrence from acute suppurative otitis media, for, in neglected cases Nature has wisely provided a drum that will usually rupture of its own accord when the pressure from accumulated pus reaches the dangerous point; or, as it occasionally does, the pus finds an exit through the Eustachian tube into the throat. This is particularly the case in children, because the calibre of the tube is proportionately much larger in early life.

Brain and mastoid implications arising from a suppurative inflammation of the ear are in nearly all cases a result of the chronic variety, although I have seen several fatal cases from the acute suppurative form. There is usually a history of chronic discharge, frequently even extending over many years. At times the "running" will cease, and the physician and patient (if he be under treatment) will congratulate themselves on the apparent success of their therapeutics, when quite unexpectedly the patient again applies for relief from a

severe pain in the ear, caused either by exposure to cold or wet, or it may be from some trivial accident, such as a slight blow upon the ear or head.

Any patient suffering from a suppurative otitis media, be it of the continued or recurrent form, is in constant danger (either from exposure to cold or traumatism) of a fatal termination. "Many apparently unaccountable cases of fatal coma are explained in this way; an old cerebral abscess, which has already lasted weeks or months without giving rise to any definite symptoms, suddenly giving way and bursting into the ventricular or subarachnoid space." It is, therefore, a safe and wise rule, as well as duteous teaching, to regard every person with a discharging ear as being in such a condition that serious, or even fatal, complications may arise on the slightest provocation.

Recent bacteriological investigations demonstrate beyond question, that the quantity and especially the quality of the discharge is an all-important factor in considering the prognosis of individual cases. The popular impression is that so long as a discharge is copious and devoid of fetor it is harmless; and of such little moment as to demand treatment only from a point of tidiness or inconvenience. This belief, notwithstanding its almost universal acceptance, is misleading and is calculated to cause in the future, as it has done in the past, much misfortune.

It is entirely true that in a freely "running ear" we have present the best possible condition to prevent brain complications, and yet we must not lose sight of the fact that a decrease in the discharge, and especially if it should stop suddenly, must be viewed with some degree of alarm, inasmuch as this sudden or more gradual decrease in the flow is frequently caused by inspissated masses of mucus and pus collecting behind a wall of dried and hardened epithelium intermixed with pus, and entirely occluding the opening in the ruptured drum, consequently preventing the escape of discharge which continues to form until the accumulation causes much pressure, and the brain or mastoid complications may be the result.

Generally speaking, a discharge of pus without fetor is considered harmless, and, therefore, in most cases receives little or no notice, unless for cosmetic purposes. Although the number of observations on the pathology of the putrefactive changes within the ear have been limited and confined to the researches of only a few investigators, sufficient information is at present made known from the recent discoveries in micro-biology to establish the fact that non-fetid pus from the ear contains large quantities of pathogenic cocci, and is, therefore, highly infectious and dangerous to life. In fetid pus it is true that cocci are also found, but they are of the diplococci variety, and the bacilli, which are also present, largely predominate.

Barker, who has given this subject much thought and study, writes as follows: "From his inoculations of animals with cultivations and pus emulsions Roher came to the conclusion that the various forms of bacilli found in the fetid secretions of the ear were not pathogenic but simply saprophytic, the animals inoculated with the bacilli either in the tympanic cavity, the auricular veins, or the peritoneum, being alive and well at the end of some months, little or no action having taken place locally. But of the pathogenic nature of the cocci there could be no doubt, from his experiments on animals typical septic diseases of various kinds being produced without fail. These observations appear to me to possess a special interest as regards the question of fetor from the ear. It has been commonly taught hitherto that a bad smell from the ear is an important factor in the prognosis of aural inflammations. My own observations, however, for a long time past have led me to question this conclusion very seriously, and to hold and teach that some of the most dangerous sequelæ of otitis media may be met with where the secretions from the tympanum are either nearly or quite odorless."

"If this be true, and I fully believe it to be so, the explanation is found in Rohrer's observations regarding the pathological cocci found alone in the non-fetid discharges, and the preponderance of merely saprophytic bacilli in the fetid. We must not, therefore, think the less seriously of a discharge from the ear because it is odorless, but must endeavor to

get rid of its exciting cause just as strenuously as if it were most offensive. This is only what we might expect from an experience of ordinary suppurating wounded surfaces in other parts, which in many cases give rise to serious or fatal septic complications without giving off any fetor."

Caries and necrosis are a frequent and serious complication of suppurative otitis, and are produced by ulceration of the inflammed mucous membrane of the tympanum, by extending to the deeper layers of that membrane (which act as the periosteum on the inside of the osseous cavities) and finally attacking the bone itself.

Politzer describes the process as "an infiltration of round cells into and around the fibrous tissue which penetrates the substance of the bone as offshoots from the mucous membrane. These round cells may undergo three transformations; they may break up and be absorbed, they may be converted into connective tissue in which depositions of lime may take place, and we then have a thickening of the bone, or they may, by degeneration and erosion, produce an ulcerative osteitis. This ulceration may be due to constitutional taint, or to retention and decomposition of secretion, or to the catarrhal ulceration and wasting of the mucous membrane."

As the carotid canal (through which passes the carotid artery) forms an anterior wall of the tympanic cavity, and the jugular fossa (in which lies the bulb of the jugular vein) constitutes the floor of the tympanum, it will be readily seen why dangerous and even fatal hemorrhage may occur as the result of caries and necrosis of the middle ear. The bony walls of the tympanum are always thin, and in some cases the roof is entirely absent. The middle and back part of the temporo-sphenoidal lobe and the outer and front part of the lateral lobe of the cerebellum are in direct contact with the middle ear. Knowing this intimate relation of the tympanic cavity to the brain to exist, it does seem surprising that many more fatal results from inflammatory diseases of the temporal bone are not recorded.

As the skin of the external auditory canal (being somewhat modified) is continuous with and forms the outer layer of the membrana tympani, suppurative otitis media may be set up from without as well as by infectious matter reaching the tympanum through the Eustachian tube, the mucous membrane of which is continuous with that of the throat and forms the inner layer of the drum. And, as many of the mastoid cells lie below the level of their opening into the middle ear, and the floor of the tympanum is in part below the orifice of the Eustachian tube, it will be seen how a suppurative disease of the tympanic cavity, or even the mastoid cells, may continue in a chronic state for months or years.

In suppurative otitis media brain abscess may be induced by direct continuity of structure, or the infectious matter may be communicated to the dura mater, causing subecranial abscess or diffuse meningitis, or to the bloodvessels in the diploe giving rise to osteo-phlebitis, thrombosis of the lateral sinus, or pyæmia. Or, as is the case in suppurative otitis externa, likewise in neglected otitis media, the pyogenic germs may find their way between the opening formed by the non-union of the vaginal and mastoid processes, thus producing a superficial mastoid abscess.

Through carious involvement of the malleus and incus there is frequently a direct communication between the tympanum and the mastoid antrum and cells, this being the usual way in which pus invades these cavities and forms a true or deep mastoid abscess.

There are many other routes along which the infection may travel; it may extend through the hiatus fallopii or the aqueductus vestibuli, or down the internal auditory meatus or it may extend along some of the numerous small veins which run between the internal and middle ear, on the one hand, and the dura and pia mater on the other.

I will now briefly relate one interesting case of mastoid disease following an acute suppurative otitis media.

On March 26th, 1892, I was called to see Mrs. L. B. and found she had been suffering from a severe pain in her left ear and head for two weeks. On inspection nothing could be seen that would suggest a forming abscess of the middle ear, and as the pain in the head was so general it quite deceived the attending

physician. On examination through the meatus we found a greatly inflamed drum and bulging of Shrapnell's membrane. We immediately opened the drum, which allowed a free escape of pus and greatly relieved the patient's pain. This was followed by leeches in front and blisters behind the ear; after which hot poultices were applied to promote suppuration. From this line of treatment entire relief was obtained for five weeks (but the ear continued to discharge); when pain was complained of over the mastoid; in fact, it involved the entire left side of the head.

The usual active measures were at once adopted to relieve pain, but the brief cessation of suffering was only while under the influence of drugs. (It is well to state that neither the mastoid nor any part of the head showed any evidence of either redness or swelling.) Three weeks later she expressed her willingness to submit to an operation, and, with the kind assistance of Dr. J. M. Barton, I opened the mastoid cells, evacuated the pus, and found, by using the syringe, that the opening in the mastoid communicated with the external auditory canal. This established perfect drainage, which relieved the patient of all pain and discharge, but the hearing was found to be destroyed.

In August we removed the drum and ossicles, which resulted in the almost immediate restoration of her hearing, which remains normal at this writing.

As all inflammatory conditions and abscesses of the brain are most serious, and especially so when dependent upon diseases of the temporal bone, it, therefore, becomes our imperative duty to make every effort to prevent these unfortunate complications, rather than to hope for their relief after having once developed.

It is not the object of this paper to enter into the subject of treatment from a general surgical point of view, but simply to offer such suggestions as are thought to be in a measure preventive, for it must now be admitted that many of the serious complications arising from diseases of the ear have much to commend the probability of their being preventable. As already shown, the majority of brain and mastoid diseases are due to a suppurative disease of the typanum, and are usually the result of the chronic form of discharge.

Most cases when applying for treatment give the history of a "running ear" extending over months or years, and that it has resisted treatment in the hands of many competent physicians. In cases of chronic discharge from the ear that do not yield to due and proper care it is now our rule to advise the removal of the drum and one or more ossicles.

By this surgical procedure we establish a free drainage and make an opening into the typanum sufficiently large to admit of the site of the disease being properly treated by antiseptic washes and applications, and, if this interference be established before brain or mastoid complications have set in, these developments will almost surely have been prevented; besides the discharge in nearly all cases will cease, and the hearing in the majority of patients greatly improve, while in others it becomes quite normal.

Or, if you have a case presenting symptoms of cerebral irritation or abscess where there is a chronic "running ear," and it does not yield promptly to the above measures in conjunction with leeches to the mastoid, etc., it may be due to pus confined in the mastoid antrum, and no time should be lost in making an incision over the mastoid and trephining the same half an inch behind and above the centre of the external meatus. Within the past year I have seen five cases relieved by this method of treatment. In suspected mastoid disease an incision down to the bone is often delayed too long, and, perhaps, is never done too soon.

The seventy-sixth annual report of the Friends' Asylum for the Insane, shows that 144 patients were treated during the past year. The limited accommodations interfere somewhat with the reception of recent cases, as the Asylum is at all times full. Some enlargement is now being made, in the shape of detached wards for some classes of patients. The superintendent refers to the need of a sea-shore branch, for the hot season. A gymnasium and employment building are commendable features serving to vary the ennui of confinement.

Annotations.

HOMŒOPATHY.

JOHN B. ROBERTS has republished in pamphlet form, a paper read by him at the county medical society, entitled "*Points of Similarity between us and Homœopathic Physicians.*" His object is to show that the points of diversity are small, and that they grow less, as scientific education improves. It is questionable if there now exists enough diversity as warrants the separation into schools; it will be still less with each succeeding year. The Old and New School Presbyterians clasped hands over a wider gulf, recognizing the individual rights of the human soul, and covering the differences with the broad mantle of Christian charity.

With Dr. Roberts' evident desire to bring about the same action in medical organizations, we fully sympathize, and regret that we cannot accept as a step in that direction the new law, which perpetuates sectarian medicine, and forces upon the medical profession a sectarian denomination. The greatest triumph ever won by the Homœopathists, is that which legalizes the term "Allopathic;" one devised by them as a false statement of our therapeutic faith, one that has been steadily repudiated by us on every occasion, but which is now fastened upon us by the Pennsylvania Legislature.

We sincerely trust that the State Society and the nominees to this Examiner's Board will decline to act under this false and injurious appellation.

HARVARD MEDICAL SCHOOL.

THE fourth bulletin of the Harvard Medical School Association contains several interesting papers on matters connected with the college. Bowditch describes the exhibit of the school at Chicago; Richardson speaks of the obstetrical department; Councilman of the pathological; Cheever of the professional horizon, etc., etc.

Mason describes scarlatina and diphtheria as seen at the Boston City Hospital. He retains the term "scarlatinal diphtheria," as he says that the Klebs-Loeffler bacillus is present in a certain number of cases. This does not appear to be a sufficient reason; for, if the bacillus is not present, the case is not diphtheritic; and the false pathology of the term may lead to misdirected therapeutics.

In the treatment of diphtheria, his indications are: support, local germicides, and the elimination of tox-albumen, which remains long after the membrane has disappeared. Food, alcohol, iron and oxygen, fulfil imperfectly the first indication. Peroxide of hydrogen is the best agent to remove the local exudate. In 50-volume solution it is safe and effectual in clearing away membranes and odor. Frequent spraying with the 10-volume solution also keeps the surfaces clean, checks glandular swelling and sepsis, and prevents the spread of the exudative process. Cocaine mitigates the pain of all local applications. Corrosive sublimate may be applied safely, if not too frequently, after cleansing with peroxide, to surfaces covered by exudation. In nasal diphtheria the author has evidently failed to appreciate the value of chromic acid. For paretic affections, strychnine is the best remedy. Elimination is to be aided by mild evacuants; but no evidence is adduced in favor of these agents, of very questionable utility.

CRUELTY TO ANIMALS.

THE various Humane Societies are up in arms to prevent the proposed race from Nebraska to the World's Fair. Over 700 miles are to be covered, by 300 cowboys, each to be allowed two horses for the entire race. In view of the shocking results of the race between Vienna and Berlin, we trust that means will be found to prevent this useless exhibition of cruelty and destruction of valuable horses. The endurance of horse and man has been fully tested on numberless occasions, and methods of gambling are assuredly not wanting, without devising new ones of such objectionable character.

Dr. L. Webster Fox has been elected Professor of Ophthalmology in the Medico-Chirurgical College of Philadelphia. Dr. Fox is ophthalmologist to a number of city institutions and has won a high reputation for skill in his specialty. As clinician and teacher, his selection is the best that could have been made.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
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NON-ALCOHOLIC MEDICATION.

IN the current number of *The Asclepiad*, Richardson gives an account of his service as physician to the London Temperance Hospital. Out of two hundred cases treated, twenty-nine died. We will not attempt an analysis of these results, as such statistics are valueless without the addition of the personal equation; and we can readily believe that B. W. Richardson could obtain results with or without alcohol that the ordinary practitioner would not readily parallel.

In acute respiratory affections he gave carbonate and acetate of ammonia in small and frequent doses; the patient being "well and carefully fed." Impending collapse was averted by the free use of ammonia bicarbonate in coffee. After the "crisis," he gave little medicine, trusting to careful feeding. For tuberculosis, he employed inhalations of ozonized oxygen, made by passing the gas through ozonic or iodized ether. The inhalations were given twice daily, for twenty to thirty minutes at a time. One case left the hospital convalescent. The second suffered from pericarditis, but finally left for a convalescent home. The third case ran the usual course to the fatal ending. The fourth, an advanced case, obtained much relief, but not a permanent recovery.

Four cases of typhoid fever were treated by the long-continued baths of Dr. Barr, and one by peroxide of hydrogen in chloroform water. One to two drachms of peroxide, in an ounce of the chloroform water, diluted, were given every three hours. In two of the bath cases the same drugs were given. In all three the effects were similar to those noted during the sulphocarbolate treatment; the tongue became moist, the fever subsided, the mind cleared, tympanites passed away, and good sleep ensued. All five recovered.

That alcohol is unnecessary in cases treated by intestinal antiseptics, has been our own observation repeatedly recorded. That it is given far more frequently than needed, must be the opinion of every physician who practices long enough to clear the drugging region and rise to an appreciation of the physiological and pathological processes. And while one must avoid the abstinence bigotry, and stand ready to administer alcohol whenever the emergency arises that demands it, such emergencies will rarely appear when the case is managed from the first by the hand of a master.

Changes in the Medical Corps of the U. S. Navy for the week ending May 20, 1893: P. A. Surgeon E. H. Marsteller, detached from Naval Academy and to the practice ship Constellation; A. Surgeon S. H. Griffeths, detached from practice ship Constellation and granted four months' leave; Assistant Surgeon S. G. Evans, detached from the U. S. S. Monongahela and granted two months' leave; Assistant Surgeon Henry La Motte, ordered to the practice ship Constellation; Medical Directors D. Bloodgoo and H. M. Wells, ordered as delegates to the American Medical Association at Milwaukee, Wis.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,

TIMES AND REGISTER,

1725 ARCH STREET, - Philadelphia, Pa.

SYPHILITIC DISEASE OF THE EAR.

I HAVE a case I would like to cure, and come to you for advice. A man, aged 27 years, married for some years, a mill worker—heater. He has been treated for four years, for a buzzing noise in his left ear, and itching of the meatus. He had also been under treatment for two years for a violent headache, which I cured by a few powders of acetanilid and soda bicarb. He always has been healthy and has no history of tramsmitted disease. He had measles when quite young. His ear never runs, but on shaking his head it feels as if something loose were jolting around in it or as if water were shaking. I treated and cured his eight months old baby for a specific skin disease, with hydrarg. ung. It healed like magic. His wife had two abortions before the birth of the last babe. I can find no history of specific trouble in him; but could not those symptoms be produced by syphilis? The pharynx, tympanic membrane, etc., appear to be normal.

I have him on the protoxide, one-third grain, and expect to increase it up to the limit of tolerance, then keep it at that. As a placebo I put a few drops of borated glycerine in his ear once a week. I also have him wash out the ear with as warm water as he can bear, for fifteen minutes each morning. *

[If there is no foreign body in the ear, the diagnosis of syphilitic disease appears most probable; and the treatment should be continued. A few doses of jaborandi, say, a drachm of the fluid extract at bedtime, would probably assist.—W. F. W.]

Governor Pattison has signed the Medical Examiner's Bill.

The Medical Digest.

FRENCH NOTES.

TRANSLATED BY E. W. BING, M. D., CHESTER, PA.

ACQUIRED SYPHILIS DURING CHILDHOOD (Clinical lecture by Professor Fournier.)—Gentlemen: I now present a woman, with three chancres of the breast. She was infected by her child who has an indurated chancre of the lip. The child was infected by its aunt, who attended to it and who constantly kissed it; this woman was syphilitic and had labial mucous patches. This history is quite common. Dr Furlard, also recently showed a child with chancre of the lip, produced in the same way. Here are then, two cases of syphilis acquired in childhood. When in a child symptoms of tertiary syphilis are seen, the question is, are they due to hereditary causes, or to acquired disease. One thinks at first of heredity; as to acquired syphilis, one is apt to overlook it, or to eliminate it as impossible. "It is so rare" we say. But, it is not so rare as one would wish. If we peruse the special publications, we can find cases by the hundred. What is then the source of acquired syphilis of infancy? Two formerly admitted origins must be eliminated.

1. *Acquired syphilis is never derived from contagion in labor.*—We mean by this the contamination of the child, (by an infected mother), at the moment of accouchement. Suppose the mother attacked by vulvar mucous patches, the child being for some hours in contact with the patches, would it not be likely to be contaminated, just as the finger of the accoucheur might be? Reasons have been given for the impossibility of this occurrence, based on freedom from abrasions; on the protection afforded by the sebaceous coating of the skin, and the natural "detersion" given the child by the escape of the waters, etc. But there is a much better reason for this impossibility of contagion *at the moment of birth*, it is because the child is syphilitic already and has nothing to fear from a syphilitic mother.

2. *Acquired syphilis never arises from maternal syphilis previous to labor.*—We

mean by this, that in the case of a woman, syphilitic before labor, who bears a healthy child (apparently), can this child be infected later on, by its mother? No, and for the same reason, that the child is already in the grasp of the disease.

Let us come to the positive causes of contagion. They may be ranged under four heads.

1. Nursing, } Causes special to
2. Surroundings. } the child.
3. Outrage, } Common
4. Medical contagion. } causes.

1. *Nursing.*—Many children are infected by nurses. In the first category, the nurse is previously syphilitic and communicates the disease to the child, and is to blame. In the second, the nurse may be, at once the victim and culpable. She may receive syphilis from one child and transmit it to others, and this is one of the most certain and common means for the spread of the disease.

2. *Its bringing up, or surroundings.*—The child may contract syphilis from its family, nurses, or visitors, in various ways. (*a*) It frequently derives it from the mother, who at her confinement may take syphilis and communicate it by kissing. (*b*) From the father, the chances are less, as he does not have so much to do with the child. (*c*) The nurse often infects by kissing, or by allowing the child to put its fingers in her mouth, and afterward transfer them to its own. (*d*) By contact with other children. Buccal syphilis, either hereditary or acquired, is frequent in children; and articles transferred from mouth to mouth, form a frequent cause of contagion. (*e*) Strangers usually transmit it to the child by kissing. (*f*) What may be called "domestic" contagion is frequently seen, from the common use of utensils and other articles, such as sponges, towels, cups, soiled linen, etc.

3. *Outrage.*—Attempts of this character on children, followed by syphilis are no doubt rare, but still it is easy to find examples in children, varying from four to ten years.

4. *Medical Contagion.*—(*a*) From the hands of the physician or by surgical instruments. Some time since, an epidemic of contamination by catheterism of the eustachian tube was noted, caused by an infected instrument. (*b*) By circumcision as practiced according to the Jewish rite. (*c*) Syphilis has been communicated by a midwife, who, after the separation of the cord, dressed the umbilicus with linen wetted with her saliva. Another transmitted the disease to fourteen women, by sucking their nipples, with the object of drawing them out. Another infected, directly and indirectly, one hundred persons, from a chancre of the finger. (*d*) Vaccination is also sometimes a cause of wide-spread infection. In conclusion, I hope to have pointed out that syphilis acquired in childhood is very far from being a rarity.—Fournier, *La France Medical.*

—

Treatment of Constipation by Large Injections of Oil.—This method is much used by Dr. Fliener, who mentions two forms of constipation, atonic and spasmodic. The first is a consequence of weakness of intestinal peristalsis. In young subjects, it may be due to sedentary habits, but is especially seen in aged persons and is due to atony of the muscular coat. Excessive distension of certain parts of the digestive tube, by gas and fecal matter, may even produce paralysis. Constipation may be complicated during its course, by catarrhal inflammation of the colon.

In atonic constipation, the abdomen is swollen either partially, or in its whole extent. The stools are harder, dryer and lumpy. To provoke alvine evacuations in this form of constipation, is generally easy. Fruits, honey, bran-bread, etc., are often sufficient; but sometimes a mild laxative is also required. Cold water injections, cold sitz-baths, massage or faradization of the abdomen, are also useful.

Quite otherwise is constipation depending on spasm, and having the colon as a point of departure; this is seen in neuropathics, neurasthenics, hypochondriacs, and the subjects of uterine disease. This is due to spasmodic contraction of parts of the intestinal tube retaining the fecal matter. Sometimes even there is contraction of anal sphincter; a characteristic of this form is the shape of the fecal matter, which is in the form either of hard spherical masses, or more or less long and small cylinders. Spasmodic constipation may be also complicated by catarrh of the tube, by colitis,

which is "irritable" and may simulate pseudo membranous colitis. There is also a mixed form of constipation, in which, while the lower part of the bowel is in a state of spasmodic contraction, the upper part is distended with gas, and in a condition of atony. Therapeutically the distinction between the varieties is of great importance. The means successful in atonic constipation are useless and sometimes harmful to the spasmodic form. Narcotics sometimes relieve the latter form, but frequently fail. A very efficacious treatment consists in the use of injections of oil, which exert both a calming influence and a purgative action on the intestine. The method of administration is as usual, the patient being in the ordinary position with the hips elevated. The injection is made slowly, consuming fifteen or twenty minutes and using from eight to ten ounces of oil, since the intestine exerts an aspirating force, the canula need not be introduced very far. Immediately after the injection, the patient does not experience any desire to go to stool, but in a short time he feels the oil "working" and finds it necessary to expel gas. There is no colic, *provided the oil be pure and sound.* After the lapse of some hours, a more less copious passage occurs, in which only about one-half of the oil administered is contained, the remainder stays in the bowel; its elimination is slow and is often only accomplished at the end of ten to fifteen days. An injection is given every day (generally for three or four) until the bowel is empty. Should the first injection not move the bowels, a simple water injection should follow it. Only olive or salad oil, free from rancidity should be used. These injections are also useful in the treatment of membranous colitis, typhlitis, proctitis and certain combined intestinal and stomach disorders. —*Rev. de Therap. Med. et Chir.*

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Duration of the Virulence of Tubercular Sputum.—Ducor saw an endemic of tuberculosis in a family who occupied a lodging, used two years before by two phthisical patients. Koch's bacilli were found on the wall paper, and guinea pigs inoculated with them died of tuberculosis. Disinfection should be thoroughly carried out, in houses where cases of tuberculosis have been cared for, even after a considerable lapse of time.—*Progres Medical.*

Further Therapeutic Observations of Europhen, (by Dr. P J. Eichhoff, Physician in Chief of the Dermatological Division of the City Hospital of Elberfield).—In the following I will briefly relate my experience with europhen since the publication of my first article in the *Therapeutische Monatsheften*, July, 1891.

In the first place I would emphasize that I have discontinued the subcutaneous employment of europhen in syphilis, because the positive advantages in this form of application were not commensurate with the consequent disturbances. Moreover, in the first cases treated by the subcutaneous method I employed europhen at the same time externally, as for example in cases of broad condylomata, and a considerable, if not the greatest, share of the favorable results must be attributed to the external application of the remedy. Aside from this I have observed recurrences in a few of the cases of syphilis treated by the subcutaneous injection of europhen, which appeared earlier than in cases in which the other customary methods of specific treatment were employed.

While abstaining from the subcutaneous use of europhen my results from its local application have been exceedingly satisfactory. I would sound a note of warning against the employment of the remedy together with or immediately after application of a sublimate solution, as marked irritation is apt to result, probably in consequence of a combination of iodine and mercury, which affects the skin in much the same manner as calomel when applied to the eyes in cases where iodide of potassium is being administered internally produces marked symptoms of reaction.

As regards the cases observed since my last report, I have to record first thirty-one cases of ulcus molle treated with europhen, in which the remedy acted very satisfactorily. Most of the ulcers were of ordinary size, and in the usual locations, the glans and the prepuce. The average duration of the healing period in the case of sores of about

the size of a lentil was fourteen days. In all these cases the europhen powder was lightly dusted on the surface of the ulcer after previous washing and cleansing, and then a layer of cotton was applied. Complications with buboes never occurred in these cases, nor were symptoms of irritation produced by the remedy if it was applied in moderate quantities, only sufficient to cover the ulcerated surface.

The ordinary course of the healing process is that the bacon-like base of the chancroids assumes a cleaner appearance during the first few days, the margins are sharply defined by a fresh red scar, the secretions of the sore become scantier and the surfaces are soon covered with epidermis starting from the margins.

In only one form of chancroid, the so-called ulcus molle elevatum, where the bacon-like, discolored granulations shoot up profusely from the base of the ulcer and overtop the margins, was the healing process less rapid in a few of the cases treated with europhen, although an immediate arrest in the further development of the affection occurred. It is evident that in these cases europhen was not powerful enough to check the granulations, but after several applications of nitrate of silver it always promptly effected healing.

Of these thirty-one cases, only a small number was treated in my division of the hospital; by far the largest part occurred in private practice aud were therefore under ambulant treatment. All the patients were satisfied with the remedy on the score of convenience, and seemed pleased that they had avoided the use of maladorous iodoform.

I also treated eight cases of leg ulcers with europhen, and here also the remedy acted very favorably, and, at the very least gave as good results as from the use of iodoform. The manner of application of europhen, in these cases was as follows: After cleansing the ulcers with five per cent. carbolic acid solution the powder was sprinkled in a thin layer over the entire base of the ulcer, the cavity tamponed with plain gauze and a fairly bandage applied. In all cases the secretion became soon scantier and assumed a healthier character, the granulations appeared healthier and the ulcers rapidly diminished in size even when they were extensive and had callous margins.

This dressing was every day or every two days according to the abundance of the secretion. In these cases, as well as in ulcus molle, I regard it most desirable to use the europhen in form of a powder, because it is always necessary to absorb the acrid discharges with gauze or cotton.

In five cases of scrofuloderma and in seven cases of lupus exulcerans cicatrization occurred under the use of europhen, which was applied in form of the pure powder or in one-third per cent. ointment. Whether, however, a complete cure of the tuberculous process is obtained by inducing cicatrization I will not maintain. I expect successful results from europhen in such cases only by reason of its cicatrizant properties when tuberculous ulcers are present, but not in cases where the surface of the lupus or scrofulous lesions is covered with more or less intact epidermis.

Excellent curative effects are also obtained from europhen in the treatment of the erosions and ulcerations of the portio vaginalis uteri which occur so frequently in connection with gonorrhœa in females. The powder is applied twice daily or a cotton tampon charged with europhen is introduced, the tampon having a favorable action upon the gonorrhœa process by absoring the secretions.

In conclusion I would remark that I employ europhen with much success as a local and external medicament in the treatment of the secondary syphilitic, so called broad condylomata, but as already stated, have dispensed entirely with its subcutaneous application in cases of syphilis, because it gives off too little iodine.

On the whole, I cannot urge too strongly the use of europhen in the above described cases as a substitute for iodoform, the more so as it has, aside from its equally rapid curative action, two important advantages over the latter—its freedom from odor and toxic effects.

Salocoll (Phenocoll Salicylate). —The introduction of another salicylic acid compound into medicine suggests a train of thought as to the important position which the acid has taken in materia medica not only from its own virtues *per se* but from the valuable therapeutical

combinations which it forms with a number of basic substances.

A characteristic property of the soluble salts of salicylic acid is the readiness with which they are absorbed by the digestive organs, the mucous membrane and even the skin. This promptness of absorption is not always advantageous, since it may be accompanied by too great intensity of action, and hence the less soluble salicylates are commonly observed to be freer from bye-effects than those salts more readily taken up by aqueous liquids.

It is especially noteworthy as one of the chief factors in the high position which salicylic acid has attained, that it and its salts are comparatively harmless even when given in comparatively large doses and for lengthened periods.

But the essential virtues of salicylic acid which it imparts in a more or less modified form into its combination are (1) an antifebrile action and (2) an antiseptic property. The reduction of the febrile temperature is usually but not invariably accompanied by perspiration. The fall of temperature is not due to this phenomenon, however, but chiefly to the influence of the substances upon the nervous centres which regulate the production of heat in the body.

Salocoll or phenocoll salicylate combines the action of salicylic acid and of phenocoll, which in the form of hydrochloride has done such good service as an antineuralgic, antirheumatic, and antipyretic. The new salt has a sweetish taste and is not so abundantly soluble as the hydrochloride — a difference which probably explains the remarkable freedom of the combination from bye-effects. Further it may be noted that physiological research has indicated the desirability of employing salicylates of preparations of the same class as phenocoll, because such salts are found to be free from any bye-effects which may be produced by the pure base.

Practical experiment has shown that neither gastric disturbances, alterations of blood pressure, nor cyanosis follow the administration of salocoll. It has shown itself a reliable and safe antipyretic, antineuralgic and antirheumatic, having beneficial effects in many cases, where other remedies proved of no use. In influenza its beneficial effects were especially marked. The dose for adults is 15 to 30 grains in powder, several times a day; in appropriate sub-divisions of this quantity it can also be given to children with safety.--Extract from *The London Therapist*, March 15, 1893.

Hematuria. — There are cases of hematuria without evident lesion or any known etiology, which Gull termed "renal epistaxis," saying there was no reason why one should not occasionally bleed from the renal nureous membrane as well as from that of his nose. Incision of the kidney may seem uncalled for in such cases, but the results in two cases mentioned justify the procedure. Tiffany urges incision of the kidney for neuralgia.—Osler, *Johns Hopk. Bulletin.*

Cold Baths and Leucocytes.—Osler confirms Winternitz's statement as to the effect of cold baths, increasing the number of leucocytes in the blood. The effect is probably local, and due to an accumulation of the leucocytes in the peripheral vessels. The increase was noted in normal blood, as well as that of rheumatic and typhoid cases; and was most marked when chill and shivering followed.—*Johns Hopkins Bulletin.*

Green Stools.—The *rationale* of green stools has been the subject of much controversy. They occur in most varieties of infantile diarrhœa at some time or other, and the color varies from a sage-green to a bright grass green. Though it has been said to be due to pigmentation derived from a special microorganism, it is now generally known to be dependent on the presence of biliverdin. It is sometimes asserted that it is due to acid fermentation in the bowel; but, apart from the fact that green stools are not always acid fermentation occurs normally in the bowels of an infant, and yet green stools are exceptional. Pfeiffer attributes it to morbid alkalinity.—Carter, *Provincial Med. Jour.*

Dysentery.--Crombie (*Indian Med. Gazette*) reported a small series of dysentery cases treated by ipecacuanha deprived of its emetine. His conclusions were that this substance possessed advantages

over ordinary ipecacuanha, in that the former did not usually cause nausea and vomiting in an equal degree. But neither form showed any special advantage over the "triple powders," of Dover's, bismuth and sodium bicarbonate, that caused no distress whatever.

STRYCHNINE IN ALCOHOLISM.—Strizover states that a traveling salesman had been in the habit of taking twelve to fifteen drinks of vodki daily, for 18 years. Strychnine, gr. $\frac{1}{30}$, thrice daily was given by the mouth, and the same dose once daily by hypodermic. This was continued for three months; and the craving of drink completely removed.

News and Miscellany.

New York City's dispensaries treat 452,422 persons annually free of charge.

Dr. George Homan succeeds Ohmann-Dumesnil as editor of the *Weekly Medical Review*.

Brodnax recommends the squatting position in labor as facilitating delivery. —*The Clinique*.

The P. and S. College, of New York, is said to have decided on a four years' course. Verily, the world has moved, since Bellevue was brought low in the effort to establish a three years' course.

The loofah is utilized in England for the manufacture of socks. The product is highly recommended by an English journal, on the grounds that the socks supply a non-conducting air-space, prevent blistering, and are washable! From this we infer that the custom of washing socks has not become prevalent in the mother country.

The Midnight Mission, for the rescue of fallen women, solicits contributions to assist in the noble and quiet work in which it is daily engaged; at the Mission House, 919 Locust Street, and at the Country Home, East Walnut Lane and Hancock Street, Germantown. To either address, donations of house-keeping materials may be forwarded, or will be called for by the Mission upon receipt of notice. Donations of cash may be sent to the Treasurer, Adam A. Stull, 813 Chestnut Street, Philadelphia. This institution has for twenty-five years been doing a noble work, and deserves the assistance of those who have funds for charity.

The forty-fourth annual report of St. Joseph's Hospital states that 1556 cases were treated in the wards during the year; while 4507 persons attended the outdoor clinics, and 2920 were furnished free meals.

We have placed patients in St. Joseph's, and desire to express our obligations for the kindness with which they were treated. The diet was excellent, and every care taken to meet the wants of individual cases; the rooms bright and the associations cheerful, while if greater devotion and skill in nursing can be shown than that displayed by the Sisters, the writer has never known of an instance. This, also, fully appreciating the good work of the modern trained nurse.

The *Indiana Medical Journal* thus vigorously defends itself against the charge of somnolency, aimed at a small section of Chicago's medical men:

"Hoosiers indeed! We read every issue of Dr. Waugh's and Dr. Shoemaker's journals, we know them both, and have dined at the former's table. We have borrowed 'soup' from both in times of journalistic need (always with due credit). Every live doctor in Indiana takes the *Indiana Medical Journal;* therefore every live Indiana doctor knows Drs. W. and S. and their journals. We repudiate the identification of Hoosier and Windy-City ignorance. Pass the slander on to the next state west."

We stand corrected. We should have said "Suckers" instead of "Hoosiers;" but were under the impression that Chicago had annexed Indiana, and that the two terms were now synonymous. However, we'll take it all back, except as to Cesna; and hope to meet our friends of both states in the White City next month, and demonstrate to them that at least one resident of Philadelphia can remain awake for several hours at a stretch, without the supervention of neurasthenia.

The Times and Register.

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COLLEGE OF PHYSICIANS OF PHILADELPHIA 1893

Original Articles.

ADDRESS TO GRADUATES.—THE PHYSICIAN OF TO-DAY.[1]

By EARNEST LAPLACE, A. M., M. D.

[Professor of Surgery, Pathology and Clinical Surgery.]

GENTLEMEN: Your state of pupilage is passed, and by the solemn act just performed you have been admitted into full membership in that great medical body, an array of human benefactors, that extends to the days of heroes and demi-gods, and whose traditions blend with the mythological romance of ancient worship.

This is to be your last lecture. The others are all over, and now comes the peroration of your course. Your diplomas are in your hands, and in wishing you God-speed in your mission of healing, it is our desire to express the wish with such intensity of feeling that you can never forget the benediction.

We are justly proud of the class of '93. We have learned to respect you, to admire you. Though to us this is an annual celebration, we realize that to each of you it is a climax in your lives. You have dreamed of it; you have hoped for it; you have struggled for it; and now, amid music, friends, and flowers, you have at last attained it. It was a worthy object, and worthily have you achieved it.

The thorough scientific and practical instruction you possess, as demonstrated by your brilliant examination, entitles you to meet students from any other institution on an equal footing. You are armed and well prepared. I therefore trust to find in each of you the type of "The Physician of To-Day"

The physician of to-day should not be a misfit; the world is full of these, and they are cheap. It requires faculty and courage to drop our tools when we have discovered our mistake; for medicine is a vocation, not a trade. A trade exists for its own rewards. A man may enter it from chance, from necessity, or an honest desire to make money out of it. That is legitimate, and if he makes his money fairly, and uses it generously, we honor him for it. But a vocation exists for its own sake. A man must believe in it and love it, and consecrate himself to it, be-

[1] Delivered at the 11th annual commencement of the Medico-Chirurgical College, May 4th, 1893.

cause it seems to him to be the noblest, grandest, happiest work he can do. If wealth and influence and fame come to him, well and good. But the work itself is the supreme and sovereign thing. The end of medicine is health; the master passion of the physician must be to make men well. Therefore I say to you, practice the auscultation of your own heart; and should you find that this is what you love best; if you feel that your manhood will find its joy and crown in following the healing art wherever it leads you, in lonely studies, in long journeys by day and night, in patient walking the wards of hospitals,—yes, into the very jaws of death to fight some great pestilence; if your brain clears and your hand steadies, and your heart warms at the thought of solving some problems of disease, and bringing relief to the suffering, life to the dying,—then go, for you are called, and that call is the force of your life. As this force animates each of you, so this Faculty has done its best to thoroughly fit you for your calling. But there are some things it has not done and has not intended to do. It has not pledged you to any dogma or narrow-minded philosophy. It has not desired your allegiance to any theories that time may not verify for you. It has not clipped your wings, and you are at liberty to soar in the vaulting realms of truth. One of England's prime ministers and greatest statesmen, discussing the causes of the progress of civilization, deliberately declared that "Science in the last fifty years had done much more in moulding the world than any political causes, and has changed the position and prospects of mankind more than all the conquests, and all the codes, and all the legislators that ever existed." A philosopher, as able as was this statesman, has declared, "I do not know whether health or knowledge contributes most to the prosperity of a nation, but no nation can prosper which does not equally promote both; they should be deemed twin forces, for either of them, without the other, has only half the power for good that it should have." And I claim that there is no knowledge from which mankind derives greater and more widespread benefit than the medical science.

On it depends the alleviation of the agony of death, the restoration of the sick to happiness and usefulness, and of still greater moment, the prevention of disease, and thereby the vigorous promotion of happiness, wealth and morality. And I also maintain that medical science promotes the welfare of the people more than any other science, and that, therefore, our medical colleges merit, far oftener than heretofore bestowed, donations for the better development of advanced medical education. Knowledge must be your constant aim. Improve your knowledge. Like the fabled Roman Sibyl, she makes her offers but once, twice, thrice, on each successive occasion diminishing the amount offered, and at length threatening to withhold all if her last offer be rejected. For to-day knowledge regenerates the world and elevates man over every-day existence.

Your present knowledge imposes upon you to do your utmost to prevent disease in spite of the fact that your livelihood depends upon the profits due to disease. Never before in man's history have there been such assuring promises of the triumph of medical science in preventing disease. The glorious dawn of happier days can now be plainly seen when suffering humanity will be given far better means to rescue itself from pain, sorrow, and death inflicted by mankind's worst foes,—the contagious diseases.

Led on by those mighty captains, Pasteur and Koch, deserving more fame than statesmen or conquerers, many pioneers have made new conquests in the realms of bacteriology, and the day is fast approaching when this youngest daughter of medicine will give mankind the power wholly to prevent the horrid devastation of contagious and epidemic diseases.

Youth is apt to yearn for opportunity to do the deeds that give men fame, and to mourn that this utilitarian age there are no longer ferocious giants or fiery dragons or other monsters to destroy; no longer unfortunate knights or beautiful maidens to rescue from captivity and death; no longer an opportunity to do heroic deeds. I would impress you, on the contrary, that this world of suffering and sin is still full of great opportunities;

full of monsters as horrid as the hydra with two heads sprouting for every one severed; full of the innocent and helpless, who can be rescued from captivity and death. Neither Hercules nor King Arthur, neither Richard of the Lion Heart, nor Bayard, without fear and without reproach, had more opportunities than you have to do great deeds. The worst monsters that ever ravaged mankind still capture and devour us, although these monsters can be vanquished. The familiar names of some of them are: consumption, diphtheria, scarlet, typhoid, and yellow fever, cholera, drunkenness. To wage war against these monsters your faculty has girded on your armor, has signed your commissions as leaders of the people against mankind's most destructive foes,—dirt, drunkenness, and disease. Teach the people that science has conclusively proved that sickness and death from catching diseases are very surely not due to the will of a pitiless God, but surely to man's fatal ignorance and negligence of the laws of nature's God. Instead of saying with reference to disease, "The Lord gave and the Lord has taken away; blessed be the name of the Lord," rather let it be, as we now see the truth, "The Lord gave, man's criminal ignorance has taken away; cursed be the name of ignorance." Teach the people that while the pagans who made ancient Rome mistress of the world established that the health of the people is the supreme law, we of boasted modern progress neither appreciate nor execute that law. Enlighten the peoble so that the interest of the government will be directed toward furnishing such appropriations as will give the quickest development to that science capable of such good to the nation.

Teach the people that medical institutions are the fountain-heads whence the science of hygiene, like pious incense, spreads over the world the message of health, wealth, and happiness. Out of these grows the flowers of love and goodwill to men, by which charities are founded, hospitals endowed, laboratories established for the further pursuance of those studies whose practical application is the raising of the human kind to a higher plane,—higher civilization, nobler aspirations,—giving an earlier foretaste of the day when man will have developed into "that crowning race which, eye to eye, shall look on knowledge, under whose command is Earth and Eeath's, and in their hands is nature like an open book, and all we are is but seed of what in them is flower and fruit."

My dear friends, do not go to your work to-morrow with the belief that you can tune the complex harp of time, known as the human body, with material tools alone. Equip yourselves with all the armamentaria that matter can furnish you, but do not forget that in addition to this outfit you must be hopeful enough to cheer the discouraged. You must be brave enough to calm the fearful; you must be wise enough to instruct the foolish; you must be good enough to reclaim the bad. Here must we remember the bearing of mind over matter.

It takes a combination of spirit and matter to form a human being. It takes a combination of spirit and matter to develop a human being. It takes a combination of spirit and matter to maintain a human being. Why should it not take a combination of spirit and matter to cure a human being? A kindly spirit must be your characteristic. There is a universal law by which like attracts like. By this law gold and other minerals arrange themselves into narrow veins; by this law birds and other animals form themselves into large families; by this law eye answers eye, voice responds to voice, and heart speaks back to heart; by this law all nature echoes back to you whatever you give to her, be it through work or deed. Would you wreath a sufferer's face with smiles, then smile upon it. Would you have his friendly confidence, warmth from your own heart is sure to accomplish it. You have but to speak to these qualities in their own language, and as sure as the tense wire vibrates to the music of its own pitch, so surely will every string of the human heart respond in faithful echoes to the voice that call out to it, for the sufferer's heart throbs as ours throbs, and pain makes him look upon us as one privileged to dispense something almost superhuman.

You will recognize, gentlemen, the power of woman's hand in the nursing of the sick. The trained nurse, skilled

in her profession and strong in soul, is the doctor's second self. To her devotion and faithfulness is success in many cases due, when it requires long, careful, and scientific attention to detail in carrying out the treatment. Honor her in her noble calling, and proclaim her worth in the midnight vigil, in the silent fight for life.

Need I say anything of the moral conduct which it behooves men of your lofty aspirations to have? Need I tell you that yours should be the type of purest manhood, who are destined to discover many a skeleton in the family closet; who will enjoy the most sacred confidence of families; who will often be looked up to as an arbitrator and common friend in your communities? It behooves you, therefore, to cultivate those jewels of morality that adorn the blameless physician.

Finally, let the faith of your childhood illumine your path; science does not lead to the overthrow of our simple faith. Science is of things material that we demonstrate and know; faith, an offering, a sacrifice spiritual. One should never be used to prove the other. They are not of the same genus. Furthermore, it has been aptly said that "a little science might take us away from faith, but a great deal of science will ultimately bring us back to it;" yes, it will only lead you on to better things until the evening of life, when it will cheer you with the bright prospects of an eternal dawn.

I had a vision. This young and vigorous school, which I love, I saw radiant with celestial light. Above it, the clear, blue sky of pure endeavor. Under it, the solid foundation of higher education. Behind it, its struggles and noble work of the past. Within it, a great class of eager students, led on by a learned and enthusiastic Faculty. In front of it, a band of alumni drawing it to the golden arch of a great destiny.

Therefore, gentlemen, to reach this ideal, which I know is not all a dream, we would see you with our alumni bound by brotherly friendship; we would see you take rank, and study to learn, study to succeed, study to acquire vaster stores of knowledge; and while the Faculty extends to you a parting hand, I read in your hearts the silent, but firm, resolve to be devoted to the best interests and progress of your chosen profession, and to reflect honor upon your Alma Mater.

It only remains for me, gentlemen, to bid you God-speed on your entrance into professional life, and with the best wishes of my heart to say a final

"Farewell! a word that hath been and must be
A sound that makes us linger, yet,—farewell!"

UNCONSCIOUSNESS THROUGH NITROUS OXIDE GAS.

By WILLIAM R. D. BLACKWOOD, M. D.

IT is well known to many persons that a long series of events may appear to pass during dreams which last but a short time, and in my own experience I have the recurrence in a dream of events covering a period of something more than three years, which had actually previously occurred, yet the vision was of not more than two or three seconds long, for sleep had lasted but to that extent in presence of several persons. Here we have the history of much time apparently passing in the dream, when in reality the period transpiring was very brief. The opposite may also happen, *i. e.*, unconsciousness may be prolonged without the person experiencing it knowing that he was not fully in possession of his reasoning faculties. A corroboration of this phase of mental condition happened to me a few days ago, and as it was very curious to myself, and is not upheld by the experience of any of a large number of persons interviewed who had the chance to feel similarly, I report it. Desiring to have a very painful tooth extracted, and being acutely sensitive to pain, I called on my friend, Dr. Kimmel, of 1306 Walnut Street, in this city, whose experience with nitrous oxide gas is probably larger than that of any other operator in the profession, and to whom I have referred many persons in the last ten years, because I have had, in common with many professional friends, much damage done by advertising so-called dentists who profess to be experts in this business. I have also been favored by the doctor in cases where but limited anesthesia (in duration) was required for slight operations, and he always kept the patient in good shape till I got through

with the knife. Well, one day last week I went to my friend and told him what was wanted—the extraction free from pain, if possible. I also told him that I had some cardiac difficulty which I knew existed, but the character of which I did not know, for I never would let professional friends who had examined me tell its nature. I am content to suffer with it when it bothers me, and I suppose it may some day wind me up, but I am fatalist enough to take what comes without grumbling, and I don't care, anyhow, about it. The doctor told me that he laid little stress on heart troubles, so far as any bad effect could be reasonably looked for because of the gas, and having had not only many of my patients who have had hearts (anatomically speaking) pass under his kind care, but having seen him extract with extreme expertness teeth for my wife at various times without any harm to her, although she suffers from angina pectoris, I sat down contentedly with a view of not only getting rid of the terrible pain, but of studying so far as possible the phenomena involved before unconsciousness took place, and the recovery from it. I have taken ether and chloroform during the war experimentally frequently, and with me there was always a period of distinct oblivion to all surroundings, with a perceptible awakening therefrom.

When I commenced inhaling the gas I noticed the right hand of the doctor resting on the instrument cabinet close to the chair. His left was behind me somewhere, either on the chair or my head. I breathed with the longest possible inhalations and exhalations, and counted them. At the fourth I noted a slight tightness in the chest, and I put my hand on it interrogatively—the doctor saying that is all right. In two more breaths the tightness was felt a little lower down, and the same action was renewed—the doctor saying "all right." At the thirteenth inhalation the young lady who held the tube to my face took it away, and the doctor asked, "Well, doctor, do you think that you can stand the extraction now?" and I replied "no;" when he said, "you would like a little more gas first?" to which I replied "yes, if you think desirable." He then said, "It has been out for more than a minute, and I could have extracted six more easily." Whilst saying this he held up the forceps with the offender in its grasp. Now for the curious part of the phenomenon, and a query as to its explanation. Before I took a single breath of gas I determined to do two things :

First. Breathe fully and deeply to save the doctor's time and trouble, for many persons are awfully bothersome under the administration, I know.

Second. I wanted to find out the pleasant and unpleasant environments—do you feel the forceps? do you feel any twinge of any kind? is the gas unpleasant or the reverse? does it sicken you after the business is over, etc.

Now, I looked at his hand on the cabinet steadily, for I supposed he had the forceps under it; (it was his right hand, and he is right-handed), I counted up to thirteen inhalations at which time the cone was removed from my face, *and instantly after it was taken away he asked the question* "Well, doctor, do you think that you can stand the extraction now?" His hand never moved all the time! Yet the extraction must have been done *after* the cone was removed, of course. To my mind there was not the millionth part of a second intervening between the cessation of the inhalation and the query by the doctor, yet he could have taken out six more teeth and he let me rest a full minute before he spoke. There we have the same action of intellection under anesthesia as during natural sleep, only it is reversed: in sleep we dream of long periods elapsing when but a moment is spent in slumber—absolute unconsciousness with complete analgesia may happen without our being aware when it begins and ends, the interregnum between the two conscious states being sometimes prolonged for several minutes.

To me there was no taste of any kind about the gas; there was not even the sensation of anything passing into the lungs or out of them; no pain, of course, was felt; the whole sensation was very delightful, and why any one who can reach such an expert as my friend, Dr. Kimmel, should stand the old-fashioned and barbarous method of being hauled about the room when neither the tooth nor the puller will let go, is more than I can understand. I have been

called a good hand at extraction myself, for I have done a big lot of it, yet I think now that I won't do it any more here at least, when I can substitute gas for strength and tact, as we all can do.

246 North Twentieth Street.

SOME NEW DRUGS.

By WILLIAM F. WAUGH, M. D.

"TRY all things and hold fast to the good." At present, when new drugs pour in upon us more rapidly than patients upon whom to try them, this advice is not easy to follow. Some trials I have made; and the results are here recorded:

"PHENALGERCINE"

An article of unknown origin, recommended as an analgesic. I gave this to a woman, 60 years of age, with neuralgic pain at the base of the brain and in the ears. She reported herself as better; but the relief was only temporary.

A woman 45 years of age, with hemicrania and acid indigestion. The drug gave no relief.

COCILLANA.

Seven cases of acute bronchitis were treated by this drug. In five, it did well, acting much as ipecacuanha, but rather more decidedly. In two it failed. These were cases of chronic bronchitis of many years' standing, with acute attacks supervening.

SALOPHEN.

A man, aged 30 years, a morphine habituè. When the daily dose had been reduced to one-eighth grain, he was seized with excruciating hemicrania. The whole head seemed to swell, and his face became intensely congested. For this, salophen proved more effectual than acetanilide, phenocoll or various combinations. One drachm of salophen was given, in doses of ten grains every hour; and always gave relief. It should be noted, however, that hypodermics of morphine, even as little as $\frac{1}{48}$ grain of the sulphate, gave still more relief.

A lady, aged 38, long subject to hemicrania since recovering from desquamative nephritis. Salophen gave greater relief than acetanilide, antipyrin, phenacetine, phenocoll or antinervine. The dose of salophen was the same as in the preceding case.

A gentleman, aged 46, with acid indigestion, gall-stones and gout. Sixty grains of salophen dissipated a threatened attack of gout, of minor intensity.

The second case noted under "Phenalgercine," took salophen, and reported some benefit, but not complete relief.

PIPERAZIN.

A lady, aged 50 years, stout and plethoric, fond of the good things of this life, suffered with indigestion and gouty symptoms. Piperazin, fifteen grains a day, was given for ten days. The gouty pains disappeared, and she was as much improved as her habits permitted.

A gentleman with a similar history, but with more decided attacks of gout, took piperazin, gr. xx, daily. He believes this averted an attack.

A harness-maker, of sedentary habits, subject to uricemia, with indigestion, headaches, etc. Piperazin, gr. xv, daily, gave him great relief.

A lady, aged 45 years, stout but pallid, subject to continual uricemic headaches. Piperazin gave relief while it was administered, but no longer.

A bank teller, aged 22 years, subject to "bilious headaches." He took twenty grains in one dose of piperazin, and broke up the headache.

In two cases of general depression, probably uricemic, in men who drank regularly though not to excess, piperazin failed to give relief.

In one case of pruritus, in a lady 32 years of age, stout and plethoric, piperazin, in doses of fifteen grains daily for a week, gave no relief. The same report was given in one case of subacute rheumatism and one of inveterate hemicrania.

These reports tend to limit the value of piperazin to the gouty and uricemic conditions; the drug proving efficient in proportion as these symptoms were marked. The great cost of the drug prevents extended experimentation; and a curious bye-effect deterred me from giving it in larger doses. It is well known that the salicylates and coal-tar derivatives all have an antaphrodisiac action. Piperazin appears also to possess this quality in a decided degree.

GLYCOZONE.

For two cases of acute pharyngeal catarrh, the mucous membrane being dry and tense, glycozone was applied with a brush every half hour; relief ensuing speedily. Glycerine relieves these cases, but as sometimes they develop into diphtheria, glycozone is preferable as a preventive of the latter.

"DEODOFORM."

A proposed substitute for iodoform. Two cases of ulcer of the mouth; deodoform cured, but not so well as iodoform.

LOSOPHAN.

The case of pruritus mentioned under Piperazin; losophan stopped the itching as soon as applied; but it returned until the lady took salicylate of soda for two weeks, and a liquid extract of malt. In two cases of pruritus ani and one very obstinate case of pruritus vulvæ that had resisted all other treatment, losophan ointment effected a permanent cure. This is a valuable local remedy for pruritus.

SALIPYRIN.

In one case of inveterate hemicrania salipyrin proved less efficient than salophen.

SALOCOLL.

Subacute rheumatism, of several winters' duration, in a lady 63 years of age; salocoll gave relief, but not more than had been obtained from pure sodium salicylate or strontium iodide.

"NERVINE GRANULES."

Two cases of epilepsy, in women under 40 years of age. The granules alone were inefficient; but when sixty grains a day of potassium bromide were taken, and spasms still occurred occasionally, the granules prevented these. Six to twelve daily were given. The dose of bromide could not be increased on account of the acne produced.

AN ANTIPYRETIC PILL.

During the first season of *la grippe's* prevalence, I treated a series of pneumonia cases with the "Febricide" pill; said to contain acetanilide and quinine, of each two grains, and one-sixth of a grain of cocaine. The results were very good; there being no deaths in the series of over twenty cases. Since that time, however, I have not been able to obtain nearly as good results from these pills. The reason may be that the type of the disease has changed; or, the composition of the pills may have been altered. I have had no information as to this point from the manufacturers, but if the quinine is still an ingredient, they have apparently solved the problem of rendering this drug tasteless. This illustrates forcibly the danger a physician incurs, who allows himself to speak favorably of any manufactured preparation; for, in spite of one's protests, the maker may continue to use such endorsements when the article vended is not that for which the recommendation was made.

The Febricide pill was intended to be a combination of acetanilide, a "febricide," cocaine, a heart tonic, and quinine, combining both properties. Theoretically, such a combination is of great value, as in many cases of continued fever these two indications are to be met. But cocaine is not distinctively and uniformly a cardiac tonic; and, if it were, the quinine is superfluous. For these reasons, I have made several attempts to devise a more satisfactory formula. The theory of intestinal antisepsis is gaining ground rapidly; and it is now admitted that in many, if not all, febrile cases, the symptoms are partly due to the absorption of toxic principles from the intestinal canal. On this principle, I concluded to substitute the sulphocarbolate of zinc for the quinine, and a better cardiac tonic for the cocaine. At my request, Messrs. John Wyeth & Bro. prepared three samples of compressed pills, of composition as follows:

No. 1
℞ Phenacetin . . . . . gr. ij ss
Zinc. sulphocarbolat . . . . . gr. j ss
Ext. cactus grand . . . . . fl. ♏ j

No. 2.
℞ Acetanilid . . . . . gr. ij
Zinc. sulphocarbolat . . . . . gr. ij
Tinct. strophanthi . . . . . ♏ j

No. 3.
℞ Acetanilid . . . . . gr. ij
Zinc. sulphocarbolat . . . . . gr. ij
Spartein. sulph . . . . . gr. ½

The first pill I tried in three cases of lobar pneumonia. At first, the good

effects were quickly manifested; the critical fall of temperature, etc., occurred in two cases in twenty-four hours; in the third, in three days. The latter was a pregnant woman, who had a miscarriage, at six months; the pneumonia relapsed, and after a long illness, she now presents symptoms of chronic pneumonic infiltration, with a cavity, but no fever; and no tubercle bacilli have been detected in the sputa, after repeated and prolonged examinations by Professor S. G. Dixon. One of the other cases recovered speedily; but the third a hard drinker, relapsed twice, and eventually died of an acute pulmonary hyperemia. The cactus was insufficient as a heart tonic; the dose of zinc too small, and the phenacetine did not appear to exercise a permanent effect. In fact, as in a very remarkable case of measles reported by me some years ago, this drug appeared to hold the disease in check for the time, and when the phenacetine was discontinued, the disease resumed its interrupted course.

This formula was given up; and for two months I have employed the two others, in all febrile cases. Without giving these in detail, I will simply say that they have shown that we have in these combinations antipyretics of great efficacy; well suited for use in pneumonia, tuberculosis, rheumatic and other fevers. Of the two, I prefer the formula containing sparteine, as apt to be more uniform and safer for general use than strophanthus. In pneumonia, however, of adults, the latter is preferable, from its properties as a tonic to the heart, and because it does not contract the blood vessels. In phthisis, with night sweats, I have substituted digitalis; while in most other cases, the diuretic action of sparteine renders it preferable. In either form, the "Antipyretic pill" is superior to the "Febricide," both in febrile affections, and as an analgesic, in neuralgias. Especially in the numerous neuralgic and myalgic attacks due to acid fermentation and attended with depression of the circulation, it has proved of superior efficacy.

Chicago is overrun with doctors, who went there to reap a harvest during the World s Fair,and are getting very little to do.

Society Notes.

NEW YORK ACADEMY OF MEDICINE.—SECTION ON ORTHOPÆDIC SURGERY.

[Stated Meeting, April 21st, 1893.—W. R. Townsend, M. D., *Chairman*.]

THE PREHENSILE TOE.

Dr. Royal Whitman presented a case, one of several he had seen, in which he was uncertain whether the condition was a mild form of club-foot, or a reminiscence of a more primitive type. The peculiar feature was the long prehensile great toe, provided with muscles which moved it in every direction. Attention had been first directed to it in this case when the mother attempted to have shoes fitted to the child's feet.

Dr. R. H. Sayre said he had seen a much more aggravated form of this condition, in which there was a very prominent "thumb" which interfered with walking, and the child also had supernumerary toes, which were twisted in various directions.

Dr. A. M. Phelps considered the case presented one of simple varus, with shortening of the abductor pollicis and plantar fascia. The deformity could probably be remedied by stretching and manual manipulation under ether, and the foot then put up in plaster of Paris.

Dr. Whitman said this treatment might be effective, but he did not consider the case one of simple varus, as the deformity was not at the medio-tarsal joint, but in front of it.

Congenital Dislocation of the Hip (*Lorenz Operation*).—Dr. V. P. Gibney said that on October 28, 1892, he operated upon a boy, five years of age, who had an anterior congenital dislocation of the left hip. His general condition at the time was excellent. There was some slight elevation of the pelvis, one and a half inches of apparent shortening, and one inch real shortening, with one inch atrophy of the thigh, but none of the knee or calf. The greatest traction which the patient could bear only reduced the shortening by one-quarter of an inch. On the right side the distance from the trochanter major to the anterior superior spinous process

was three inches, and on the left side, two and one-half inches. The trochanter was only half an inch above Nelaton's line. While one assistant made traction and abduction of the limb, and another made counter-extension by means of a flannel bandage at the perineum, subcutaneous myotomy was made of all the adductor tendons and of other points within reach. By flexing the thigh, the muscles attached to the tuber ischii were brought into prominence and were then divided subcutaneously through a second punctured wound. Then firm traction and abduction brought the limb down until it was of the same length as its fellow. An incision about three inches long was then made, extending from the anterior superior spinous process in the vertical axis of the limb, exposing the fascia lata. On cutting this fascia transversely, the tensor vaginae femoris and sartorius muscles were exposed, and on retracting these, the capsule of the joint was exposed. It was divided anteriorly, thus bringing into view the head of the bone, which was somewhat flattened. On cutting away the long ligamentum teres, the acetabulum was found to be very shallow. A cup-shaped depression was gouged in the acetabulum, the head of the bone placed in this, and the wound drained and closed. An antiseptic dressing was applied, and the limb put up in plaster of Paris in extension and abduction. The boy reacted well to the operation, and on December, when the plaster was renewed, there was found to be one-fourth inch shortening, but the movements in all directions were good and painless. On December 24th, when the plaster was again changed, it was found that the head of the bone would slip out of the acetabulum on very slight provocation, and from this time on it became very difficult even with the aid of various splints, to keep the bone in place. On April 17th, he died of diphtheria, and at the autopsy, the left leg was found markedly rotated outward, and shortened, the trochanter major being half an inch above Nelaton's line. The head of the bone was dislocated forward and rested firmly in the socket below the anterior superior spine of the ilium, where it was held in place by firm adhesions anteriorly, in the line of the original operation incision. At the new articulation, the head was eroded, the angle of the neck was depressed, and the depression made at the time of the operation had been entirely filled up with tissues, which seemed to consist partly of bone, and partly of cartilage. It was evident that any attempt at complete reduction into a normal acetabulum would have been attended by a complete rolling in of the limb, and of the leg, so that a subsequent osteotomy would have been required. The rim of the pelvis on which was located the anterior superior spine, was found to form an effectual bar to the slipping up of the bone during walking, and it was evident that although the limb was not in the new acetabulum, as expected, for practical purposes, the newly formed joint was more useful than a poorly formed one on the dorsum of the ilium, and that although there was some slight motion upwards, it was not equal to that obtained in the old and imperfectly formed acetabulum.

Hoffa's Operation.—In connection with this case, Dr. Gibney also reported a case in which Hoffa's operation had been performed by Hoffa himself, at the Hospital for Ruptured and Crippled, in the presence of a number of distinguished surgeons. Dr. Hoffa considered the case an excellent one for the operation, which was done on September 28, 1891, the patient being a girl, two and one-half years of age. The limb was held flexed at an angle of about 145°, while a straight incision about three inches long was made in the line of the femur in such a position that the tip of the trochanter major was at its centre. The incision was carried through the glutei muscles in the line of their fibres, and a split made in the capsule of the joint corresponding in direction and length with the external incision. The ligamentum teres was divided with curved scissors, and the head of the bone made to protrude through the opening in the capsule. The muscles attached to the trochanter, major and minor, were divided through the same opening. The upper part of the acetabulum was scooped out to a depth of nearly three-fourth of an inch, the joint thoroughly flushed with sterilized water, and the head of the bone placed in this newly formed acetabulum. It was then found that the limb

could be brought down parallel with its fellow without throwing the head out of the cavity. The wound in the capsule was closed with catgut suture, the external wound filled with iodoform gauze and a bichloride dressing applied. While traction was made, plaster of Paris spica was then put on from the ankle to the lower border of the ribs. The child bore the operation well, but four hours later the temperature was 104°, and the next morning 103.6°. It did not reach 100° until October 19. Up to November 5, when the child was discharged, there was a fluctuating temperature and suppuration of the wound, and efforts were simply made to keep the limb in good position, and to stimulate the child. The wound did not heal until the middle of December. For about two months there was paralysis, limited to the region and muscles supplied by the branches of the sciatic nerve. During this period, a hip splint was applied. On April 11, 1892, it was noted that the paralysis had disappeared, and the child was still wearing the brace. She could move the toes and raise the limb easily from the table. There was limited motion at the hip, knee and ankle. The trochanter was then below Nelaton's line, and apparently a little further forward than on the right side. About November 1st, the child was etherized, and adduction overcome by manual force, and the limb put in a position of abduction. On January 26, 1893, there was found to be some shortening of the tendo Achillis, and the foot was in a position of moderate valgus. She could flex to 90°ℳ and extend to 175°; the adductors were quite tense and resistant. An examination made on April 21, showed the great trochanter above Nelaton's line, a moderate degree of adduction, and one inch shortening.

AN OLD UNUNITED INTRA-CAPSULAR FRACTURE OF THE FEMUR TREATED SUCCESSFULLY BY OPERATION. — Dr. Willy Meyer presented a man, thirty-nine years of age, whom he had first seen last November, at which time he gave a history of having fallen ten months previously from a height of sixteen feet, and striking on his feet. Since that time he had been unable to walk, and he evidently had not been treated for any special diseased condition. He was limping on two crutches and was just able to touch the floor with the tips of the toes on the affected side. The leg was turned outward, shortened, and greatly atrophied. The great trochanter was at least three inches above Nelaton's line, there was outward rotation, and on traction the leg could be drawn down a good deal. Then crepitation was felt; there was evidently an ununited intra capsular fracture of the neck of the femur. Dr. Meyer decided to perform arthrotomy of the hip, and determine the exact condition. If the head was found to be movable in the joint, and on scraping the surface, it bled, an attempt would be made to unite the neck to the head; otherwise it would be simply excised.

The operation was done on December 2, 1892, at the German Hospital. Langenbeck's slightly curved incision was employed, and on entering the joint, a fracture was found to be entirely intracapsular, and the capsule greatly enlarged. Both fragments were found to be united by long connective tissue. The neck had fractured from the head at the base of the latter, and the entire circle of the head was freely movable in the acetabulum. On cutting away the adhesions between the two fragments, it was found that both the surface of the head fragment and that of the neck fragments was concave. The angle between the shaft and neck also seemed to be less oblique than normal. On scraping the head-fragment, it bled over its entire surface, so it was decided to unite the head to the shaft by nails, and accordingly the periosteum was stripped down, and the bone chiselled away so as to make a convex surface on the neck fragment. Long screws not being at hand, Wyeth's nails were employed. They were introduced from the trochanter through the longitudinal axis of the neck into the head. The first nail broke at the surface of the bone; the second, on removing the handle, also broke, but inside of the bone. The steel evidently was very poor. Although carefully sterilized, these nails could not be left *in situ*. So the bone was chiselled away in the shape of a small funnel so as to get at the broken end of the nail. The latter was then partially extracted to admit of its easy removal subsequently. Two drainage tubes and some iodoform

gauze were inserted, and an antiseptic dressing, adhesive plaster, and extension splint applied. The next morning the patient was in collapse as a result of a free and continuous parenchymatous bleeding from the porous, atrophied bone. Saline and stimulating enemata did not help, nor a hypodermoclysis of 800 cc. saline solution. But after an intra-venous injection of one quart of salt water, he was very much better, and from that time recovery was steady. The nails were removed at the end of eight weeks, and at the end of the tenth week, he was allowed to get up and go around on crutches. The shortening before the operation was three and one-fourth inches, and it is still one and one-half inches.

The speaker was of the opinion there was bony union, but when the patient was shown to the Surgical Society, some of the members thought there was no bony union, but a very little close adhesive union. The removal of so much bone from the neck, the changed angle, and the atrophy of the muscles, however probably accounted for any effect in the motion. The latter was actively as well as passively quite free. The man now easily walked with one cane. He could also walk without any support.

DISCUSSION.

Dr. A. M. Phelps said that Hoffa had reported sixteen cases, all of them successes. If his operation proved to be successful once in fifty times, it was an improvement on anything now known, for, so far, there had not been a single case in which a congenital dislocation of the hip had been cured by any instrument known. Hoffa's cases, however, should be examined five years after the operation. He was of the opinion that in congenital dislocation of the hip the acetabulum is not always absent, but is almost always deformed. A specimen presented by him in Washington showed that the pressure of the head had caused the deformity of the acetabulum. If Hoffa's operation had been performed, a good socket would have been formed. Where the head and neck are absent, as sometimes occurs, any operation short of complete excision, and a gouging out of the acetabulum, would surely fail. In the case just presented, suppuration unfortunately occurred; it was really a case of hip joint disease following Hoffa's operation and the accidental infection of the wound. He had made the best possible use of all known instruments for the treatment of this condition, but he had not yet seen any case cured, and very few had been benefited materially. In every case the limb had shortened up. Where the joint is firm, he would not think of operating. In fractures of long standing, in some cases of hip joint disease, it is possible by prolonged traction in bed to succeed in pulling the limb down.

Dr. S. Ketch said that he did not think we should accept any of the cases reported by Hoffa as unqualified successes until a suitable time had elapsed, and examination had shown them to be actual cures. He had had no personal experience with Hoffa's operation, but he would not think of advising this operation until we knew more about it than at present. It is a good operation theoretically, but whether the new acetabulum will hold the head of the bone after exposure to the traumatism of walking, is still an open question.

Dr. Whitman said that the relation of the neck of the femur to the shaft should, if possible, be ascertained before operation; for if, as in the case reported by Dr. Gibney, the neck was twisted forwards, an osteotomy of the shaft would be necessary as a secondary operation, in order to rotate the leg outwards to its normal position. He was in favor of the operation, and thought it should be performed as early as possible. The new acetabulum should be made large and deep, the head of the bone held firmly in position, and sufficient pressure applied to restrain the new bone formation which might obliterate the artificial acetabulum, as in the case under discussion.

Dr. Myers said he thought most surgeons had very little notion of how large an acetabulum could be made. A number of experiments on the cadaver had shown him that it could be made of very considerable size. One should avoid making too much traction, as there is no use in putting the head of the bone in the acetabulum, and then pulling it out again. This tendency of

the head to slip out can be prevented by considerably abducting the limb. He thought the operation of Lorenz more scientifically correct, and easier to perform. Two deaths had been reported from Hoffa's operation.

The chairman, referring to Dr. Willy Meyer's case, said he could not see how there could be such perfect motion if only fibrous union existed. The four cases he had treated mechanically had all proved failures. He had seen nothing like the result exhibited in this patient, and although when traction is made on the limb, there is a slight slipping of the soft parts, he did not think this indicated fibrous union. It seemed to him that the slipping was about equal on both sides of the body.

Dr. R. H. Sayre thought there was undoubtedly more mobility in the joint operated on than on the other side; for, on holding the pelvis still, there is a distinctly larger area of motion on the injured side. This however, might be due to atrophy of the head, or to the amount of bone removed. In any case, the limb is practically very useful. In his opinion, an operative procedure in patients of this age, or even older, is much better than the usual let-alone treatment. He was particularly interested in the statement about the vascularity of the head, as this would seem to indicate that when these cases are seen early, by proper treatment they can be made to unite without operation. It is evident that in many cases the vascular supply to the head of the bone is quite sufficient to afford nourishment, whether or not it was limited to the ligamentum teres, as had been stated. Many cases had been reported of union by simply securing proper apposition and immobilization for a sufficient length of time.

Dr. Whitman said that as there was three inches shortening before operation, the neck could not have been in contact with the head. He thought all must agree that the union in this case was firm, and that although the motion was limited, it was equal in all directions and the result was very satisfactory.

Dr. Meyer, in closing the discussion, said that if careful mechanical treatment had been tried and union not obtained within a reasonable time, he would then operate. He had been surprised at the vascularity of the head in his case, and at the great atrophy and fatty degeneration which had taken place in the shaft-fragment, which had been so marked, that the nails passed through the bone almost as if going through wax. Another point of interest was that there had been no adhesion whatsoever between the head of the bone and the acetabulum.

"The Elements of the Early Differential Diagnosis of Pott's Disease."—Dr. Royal Whitman read a paper with this title.

DISCUSSION.

Dr. A. M. Phelps remarked that one important point in the differential diagnosis was that in wry-neck the face is turned away from the contraction, whereas in Pott's disease the face is turned towards the contraction.

Dr. S. Ketch said that long ago Dr. Shaffer, in his work on Pott's disease, referred to this peculiar condition of the sterno-cleido mastoid muscle, and also to the diagnosis of the location of the disease, *viz :* that in cervical disease high up there is an interference with the function of rotation, and in disease of the lower cervical region there is interference with extension and flexion. The speaker called attention to the remarkable apathy exhibited by the laity regarding the appearance of a deformity of the spine. A case in point was that of a child who was brought to the clinic for ankle joint disease. In the course of the examination the father remarked that the child had had a stomach ache for a long time, and following the usual rule to examine the spine under such circumstances, he found a very large kyphos. The father had never noticed this before, and although the child had been under the care of a physician because of the stomach ache, no examination of the spine had been made.

Dr. L. W. Hubbard said that a few weeks ago a child, the only one of very respectable parents, bad been brought to him with a very marked deformity of the spine, extending from the sixth to the eighth dorsal vertebra, yet the mother had only noticed it two weeks before. Many of the symptoms referred to in the paper were present, and this case had

also been under the care of a family physician for some time. The speaker emphasized the importance of the muscular conditions found in connection with Pott's disease, and called attention particularly to the early presence of psoas contraction in disease of the lumbar region—even before abscess is present. He had never seen the least rigidity of the lumbar spine due to Pott's disease in which there was not marked psoas resistance on one side or the other.

Dr. R. H. Sayre thought the paper most excellent. He had noticed in certain cases of disease of the first and second cervical vertebra that instead of being relieved by lying on the back, and slight traction being made, the reverse was the case, the child being compelled to sit in a chair, leaning its head against a pillow because of the feeling of fright and dread whenever it attempted to lie down. This was probably because the disease was between the odontoid process and the front part of the atlas, and lying with the head back brought together the inflamed surfaces, and increased the pain and spasm. He had also seen disease in this region where the face was not turned towards the contracted muscle, but was twisted away from it, because other muscles happened to be contracted also. He had not always found rachitic curves "quite out" when the child was in the prone position, to such a degree as the author had described, because in some of these children there is an acute arthritis in various parts of the body. He had seen these angular distortions remain rigid, just as in tubercular angular deformity. In small children, he had not observed anything but the spastic hemiplegia of which the author spoke, but in older children, and in adults, he had seen an ataxic form of hemiplegia without spasticity, and not until afterwards was the kyphos and typical Pott's disease noticed.

Dr. Phelps said he could not understand how in a case of wry-neck the face could be turned towards the contracted muscle — it is purely a mechanical problem.

Dr. Myers said that he had seen several girls about sixteen years of age, in whom the lumbar spine was very prominent, and slightly rigid, and he had been uncertain whether or not there was true disease of the spine. These girls were engaged in doing needle-work, and they sew much of the time with the head thrown forward.

Dr. A. B. Judson referred to a small group of cases in which wrong diagnoses had been made, or unnecessary alarm excited, by projecting vertebræ between the fifth and ninth dorsal. In this region the spinous processes are extremely long and project downward in a direction not very far from vertical when the patient is erect; but when the patient stoops, even in a slight degree, these long processes approach the horizontal and make a row of projections which are rather alarming at the first glance. The cases which he had collected occurred in girls at or soon after the time of rapid growth, when the attitude is apt to be stooping and the skeleton is not well covered with fat. Any doubt about such a case is at once dispelled when it is noticed that the natural curve of the spine in this region is not broken into two curves, meeting at an angle, as in incipient Pott's disease, and by recalling the peculiar vertebræ referred to.

Dr. Whitman, in closing the dicussion, said that the distortion of the head in the early stage of Pott's disease was caused by the contraction of certain muscles, and by the shape of the articulating surface of the vertebræ.

Simple wry-neck was not unfrequently caused by contraction of the lateral and posterior muscles of the neck, the sternomastoid being unaffected. In such a case the pathognomonic sign mentioned by Dr. Phelps would be misleading. The diagnosis was, rather, to be made on careful history, grouping of symptoms, and on the anatomical relations of the parts involved. The position of the head was often suggestive, but not always *the* important diagnostic sign.

Dr. G. A. Merrill, a Harvard graduate, in Chicago, has been arrested on the charge of advertising for patients, from one of whom he is said to have collected $75, in advance, and gave no services.

The Texas State Medical Association voted, by an overwhelming majority, to exclude negroes from membership.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
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SEXUAL CRIME AMONG FREEDMEN.

IN the *Virginia Medical Monthly* for May, Drs. Hunter McGuire and G. Frank Lydston discuss the subject of sexual crimes, as committed by the negroes of the Southern States. These have grown quite common since the war, in spite of the penalty: "Death—certain, swift and merciless." McGuire says the negro is deteriorating, morally and physically. Insanity was uncommon among the slaves; now, the asylums can hardly accommodate the insane negroes. The causes may be summed up in the one fact, that the negro is as yet much less able to provide for himself well, as his master did. Poor food and clothing, bad hygiene, have made scrofula, syphilis and tuberculosis very prevalent.

In his reply Dr. Lydston treats of sexual perversion, and its causes among the negroes; such as the heredity from savage ancestors, undue animal propensity from low differentiation, defective psychologic inhibition, degeneracy of higher attributes and tendency to reversion of type, the removal of the restraints of slavery, inherent inadaptability to environment, incapacity to appreciate consequences of sexual crime. He then suggests castration as a punishment for sexual crime, and enters his protest against capital punishment, on the ground of its uselessness as a preventive of crime.

In spite of the summary manner of dealing with such crimes in the Southern States, we see them becoming constantly more frequent. Indeed, it is probable that in the publication of the details of such occurrences is the strongest incentive to their repetition. The same observation has been made as to suicide; when any peculiar method of self-murder has been published, repeated imitations are sure to occur. Double murders also follow each other in quick succession; and, in fact, it seems certain that the abnormal human intellect is quick to seize on any suggestion that harmonizes with its own mental peculiarities, and to act upon it. The theory that the spectacle of a man castrated as a punishment for sexual crime would have a powerful deterring influence on others, is certainly worth putting to a practical test. The crank may work himself up to the point of giving up life itself in a blaze of notoriety, but giving up his manly attributes does not possess the same attractive features. Idiotic females would not be apt to decorate his cell with flowers, and nauseate every rational person with their attentions, under such circumstances.

We would be sorry to accept Dr. McGuire's pessimistic views as to the results of emancipation. The immediate effects of so rational a measure were sure to be what has occurred, else all history, all experience, were false. Millions of ignorant human beings taken from slavery and thrown at once on their own resources, the movement of the mass was necessarily at first in the downward direction. But not with all; for from the first there was a certain percentage that rose in the

social scale. And if one may speak, in such a learned discussion, from impressions alone, without consulting the statistics, the number of those who are rising above the slavery standard, of intelligence and well-being, is annually increasing. This is certainly the case where the proportion of the negroes to the white population is small, and the opportunities for advancement diversified, as they are here, in Philadelphia.

One most important point was overlooked by Dr. Lydston; the possible sacrifice of innocent men to the unreasoning fury of mob law. Especially is this likely in dealing with sexual crime. The sexual pervert is known among women also, and the hysterical female who secures the desired attention to herself by bringing groundless accusations against men is, unhappily, a well known type. Many a reputation has been blasted, many an innocent life taken, to satisfy this hysterical craving for masculine sympathy. And the fact that this sympathy is so spontaneous in its manifestation, renders the danger all the greater. There exists in the heart of every man a repugnance to the thought of any other man possessing himself of a female's person, whatever may be his own practice in that respect. He readily believes that the other man must have employed foul means to accomplish his wicked designs; and hence these tales of imaginary grievances meet with instant belief; and, when the circumstances are such as to create great excitement, the swift and awful punishment is but too apt to be wreaked on the supposed offender in a whirlwind of indignation, without that judicial investigation necessary to prove his guilt. We submit the proposition that when a negro is accused of sexual crime by a white woman, the story is not necessarily true; and that a sufficient number of such tales have been proved to be false, to justify those who claim that even here the law should be invoked in due form, to punish the guilty and to shield the innocent.

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SYPHILITIC ULCERS.

IN reply to inquiry made on page 424, in reference to "palatal ulcers," I beg leave to inform you that the case was well at the time of publication; having made a very rapid recovery, on antisyphilitic treatment in conjunction with topical applications of pure tr. hydrastis to ulcers.

J. K. LEGARE, M. D.

FORKLAND, ALA.

Book Notes.

LESSONS IN PHYSICAL DIAGNOSIS. By Alfred L. Loomis, M. D., LL. D., Professor of the Practice of Medicine and Pathology in the University of the City of New York. Tenth Edition, Revised and Enlarged. Octavo. Illustrations, some in color. 240 pages, extra muslin, price, $3 00. New York: William Wood & Company.

When a work reaches its tenth edition, it has won a place that renders praise or criticism alike unnecessary. In the present edition the chapters on the heart and the urine have been rewritten, and a section on clinical microscopy added. The latter is beautifully illustrated with colored plates. The paper, and mechanical work deserve a word of special commendation.

ATLAS OF CLINICAL MEDICINE. By Byrom Bramwell, M. D., Volume II, Part II. Edinburgh. Printed by T. & A. Constable at the University Press, 1893.

The current number of this fine work treats of alterations in the fields of vision, syphilis, Friedreich's ataxia with *main-en-griffe*, and Asiatic cholera. The

plates are unusually fine; those on syphilis are well-chosen, and present typical manifestations of the disease. To the article on cholera is added Haffkine's lecture describing his method of inoculation with cholera-virus. This number of the Atlas is fully up to the high standard of its predecessors.

A Hand-Book of Local Therapeutics. By Allen, Harte, Harlan and Van Harlingen. Edited by Harrison Allen, M. D. Ootavo—500 pages, price $4.00. P. Blakiston, Son & Co., Philadelphia.

The articles described are taken up in alphabetical order; a bad arrangement, as any classification is better than none; and the copious index of remedies renders the alphabetical arrangement unnecessary. The uses of each drug for affections of the eye are given by Harlan, of the skin by Van Harlingen, of the ear and air passages by Harrison Allen, and the surgical uses by Harte. The authors have endeavored to limit their work to drugs that have been tried, instead of accepting for each novelty all that its promoters claim. They may have omitted some valuable matter thus, but the gain far exceeds the loss. The book is a store-house of useful things to the general practitioner. The method of compilation gives the buyer four valuable special works for the cost of one.

Surgery. A practical treatise with special reference to treatment. B. C. W. Mansell Moullin, M. A., M. D., Oxon, etc. Assisted by various writers on various subjects, with 600 illustrations, many of which are printed in colors, about 200 having been made from special drawings. Second American edition, revised and edited by John B. Hamilton, M. D., LL.D., etc. Philadelphia, P. Blakiston, Son & Co., 1012 Walnut St., 1893. Cloth, 4to. pp. 1238. Price $7 00.

The second edition follows the first with an interval of only two years; so that the favorable opinion we expressed of the first edition has been verified by the approval of the profession. In the second edition, a chapter on Military Surgery has been added, that on amputations enlarged, and surgical bacteriology newly illustrated in colors. The frontispiece illustrates Senn's method of intestinal anastomosis, and gives an excellent picture of Senn himself. In its execution, literary and mechanical, the work is admirable. Surely with such text books at his service, it is little wonder that the student of the present day graduates at once into a finished surgeon, daring to undertake at once operations our fathers never dreamed of performing.

A Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, A M., M. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, the American Academy of Medicine, the British Medical Association; Fellow of the Medical Society of London, etc., etc. Second Edition. Revised. In Two Royal Octavo Volumes. Volume I, 353 pages: Devoted to Pharmacy, General Pharmacology, and Therapeutics and Remedial Agents not Properly Classed with Drugs. Volume II, 680 pages: An Independent Volume upon Drugs. Volume I, in Cloth, $2.50 net; Sheep, $3.25 net. Volume II, in Cloth, $3.50 net; Sheep, $4.50, net. Philadelphia: The F. A. Davis Company, Publishers, 1914 and 1916 Cherry Street.

A great deal of new material has been incorporated in this edition, and the first volume has been subjected to thorough revision. In its present form the work is the best text-book on therapeutics in the English language, for the general practitioner's use. Dr. Shoemaker believes in the value of drugs, and that in no half-hearted way. His resources are numberless, so that the inexperienced youth may be perplexed to make his choice; but the physician must be a marvel of erudition and experience who does not find hints of the utmost value that are new to him, in every section of the work.

The Medical Digest.

FRENCH NOTES.

Translated by E. W. BING, M. D.

Chester, Pa.

The Rôle of Flies in the Transportation of Cholera, (Sastchenko).—Experiments have shown that Koch's comma bacillus may adhere to the bodies of these insects, so that they may transfer the disease from place to place. The author made some experiments by causing flies to alight on pure cultures of the bacillus, and on cholera dejections. Cultures prepared from the excrement of

flies two hours after they had been in contact with cultures of the cholera germ, contained, in addition to numerous saprophytes, a small number of Koch's bacilli. Excrement taken from six to twenty-four hours after the flies had been in contact with the germs gave cultures rich in comma bacilli, and poorer in saprophytes. Control experiments with excrement of flies, which had not been inoculated, gave negative results. The author has found the bacillus in the excrement three days after the flies had absorbed it. The bacilli gave virulent cultures, killing guinea pigs just as the pure culture did. In the same way Metschnikoff's bacillus also gave very virulent cultures. The conclusions are, that Koch's bacillus, as well as other bacteria found in the intestines of cholera cadavers, may be preserved in the digestive tube of the fly for three days or more. The cholera germ, by this passage, does not lose its virulence, and the same is true of Metschnikoff's bacillus.—*Bull. Gen. de Therapeutique.*

—

Cancer in England, according to Roger Williams, is on the Increase.—From one death in one hundred and ten in 1838, the figures rose to one in seventy-four in 1850; one in sixty-two in 1860; one in fifty-four in 1870; one in forty in 1880, and one in twenty-eight in 1890. The same increase is also seen in Scotland, Norway, Holland, Prussia, and Australia. In Ireland alone the mortality from this cause is rather on the decrease.—*Prog. Med.*

—

France has now an Epidemic of Typhus Fever.—Cases at Manks, Paris, Lille, Annius and other towns. Daily disinfection of railroad cars and other conveyances in the infected district has been ordered.—*Idem.*

—

The Oriental Steam Navigation Co., will run a steamer direct from London to (Civita Vecchia—for) Rome, for the accommodation of members of the International Medical Congress. Stop over privileges allowed. Fair, return, $200. —*Idem.*

—

Optic Atrophy Following the Use of Iodoform for a Burn.—Following an iodoform dressing employed for a large burn, in a child under the care of St. Germain symptoms, such as headache and vomiting, were the preludes of complete blindness. A year afterwards the blindness persisted and the pupils were white and shrunken. Amaurosis having coincided with the symptoms of iodoform poisoning, and moreover, these having an action on the brain, there was established a relation of cause and effect, between the poisoning and the eye symptoms.—*Le Progrès Medical.*

—

Combination of Several Alkaloids, in a Solution for Use as a Collyrium.—Dr. Berger thinks by the combination of alkaloids we get a more active, while at the same time less poisonous, preparation for use in the eyes. By the use of a mixture of equal parts of one per cent. solutions of atropine, duboisine and cocaine we obtain a mydriatic action unobtainable by any other means. A mixture of

Sulph. atropine } " duboisine }	aa 30 c. grms
Chlorhyd. cocaine	2 "
Dist. water	100 "

is a mydriatic at least as powerful as a one per cent. solution of atropine, without being as toxic. A mixture of

Sulph. eserine	1 grms
Hydrochlor. pilocarpine	2 "
Dist. water	100 "

is very efficacious and well supported. A mixture as follows:

Chlorhydrate cocaine } " pilocarpine }	aa 2 grms
Dist. water	100 "

presents all the qualities of cocaine with the further advantage, that the mydriasis and the difficulties of accommodation observed in the eye simply cocainized, are wanting.—*Rev. de Therap. Med. Chir.*

—

There is a movement in France towards granting pensions to the families of physicians dying during epidemics, when engaged in the work of treating other victims. It is proposed to place them in the same class as military surgeons dying during service in war.—*La France Medicale.*

—

Good and Bad Nursing Bottles (Blakes).—It has been said, and cannot

too often be repeated, that the best nursing bottle is the breast of the mother. The milk passes directly into the child's mouth, without being exposed to the action of germs which cause so much mortality among infants. Milk is a singularly delicate fluid and alters with extreme rapidity on exposure to the air. Numerous varieties of microbes are reproduced rapidly in it and provoke the often mortal diseases of nursing children. Among these is the bacillus of green diarrhœa, the bac. coli commune, which in special conditions determines infectious diarrhœas; the filamentous microbes of infantile cholera, which occasion diarrhœas and uncontrollable vomiting, ending generally in asphyxia and death. Microbes of tuberculosis, syphilis, typhoid fever and many other diseases, may also find a "host" in the milk, or its containers Bad nursing appliances are greatly to blame for the mortality among infants, and include all forms of the apparatus which can not be thoroughly and perfectly cleaned. The bottles furnished with the long tube have been called "instruments of infanticide" and not without reason. The moral to be drawn from the above, is to use only those bottles which cannot afford lodgment for germs and nipples which can be thoroughly cleansed.—*Bull. Gen. de Therapeutics.*

Caffeine-Chloral. — Chloral possesses to a high degree the characteristic property of all aldehydes to combine with a variety of chemical substances, especially with those of a weak basic character, such as formamide, urea, cyanogen, etc., in which the physiological action of the respective compounds is more or less modified. The therapeutical advantages of some of these combinations are admirably illustrated in the use of chloralamid, the compound of chloral with formamide, and it appears that a similar combination of chloral with caffeine may also prove a valuable remedy in cases of constipation and in irritable conditions of the peripheric nervous system.

Caffeine-chloral has been recently employed with success in the Augusta Hospital, Berlin, by Professor Ewald, who administered it subcutaneously, dissolved in water, in single doses of three to five grains up to six to fourteen grains *pro die.* The injections were generally unaccompanied by the slightest pain, although individual patients complained of a slight burning sensation at the point of injection, which continued for about three hours.

Thirteen cases of constipation were treated; thin stools passed within three hours of injection of three to six grains caffeine-chloral in eleven cases, in which the constipation was of three to six days' duration. In one instance an ounce of castor oil had been administered the day before without effect, and copious irrigation had also been unsuccessful. Constipation appeared again in this case five days later, and six grains caffeine-chloral were administered at intervals of two hours, without previous dosage with castor oil, with like success.

In one case of gastric ectasis, accompanied by severe paroxysms of pain in the neighborhood of the stomach, five grains caffeine-chloral were administered to combat the pain. The patient volunteered the information the next morning that a thin stool passed a few hours after the injection, and since that time the stools have been well formed and regular.

Only one out of the thirteen cases of constipation withstood the remedy, and here irrigation had to be again resorted to.

Professor Ewald also administered caffeine-chloral in eight cases of rheumatic difficulties, and in seven cases the pain and swelling of the joints was mitigated by injections of three to six grains *pro die.* In all these cases previous treatment with sodium salicylate, for periods varying from two to seventeen days, had been without effect upon the course of the complaint.

A complete disappearance of pain is reported in one case of ischia after a few days treatment with injections of three grains daily, and considerable improvement was noticed in a case of supposed rheumatic pains in the testicles and hip-joints. The injections also proved serviceable in reducing the pain after lead poisoning.

In two cases of emphysema accompanied by violent attacks of asthma which resisted morphia, the rapid disappearance of complications after a single injection of three grains caffeine-chloral was re-

markable. The asthmatic difficulties in a case of nephritis and myocarditis, were also diminished by injections, which further exerted a favorable influence on the chronic constipation.

As a result of his observations, Professor Ewald is therefore in a position to state that the injections of caffeine-chloral have, besides a loosening action in cases of constipation, also a quieting and soothing influence upon the peripheric nervous system in irritable conditions. To what extent this action is due to the caffeine is at present doubtful, as experiments on animals have indicated that in the presence of the influence of chloral, the action of caffeine in less than toxic doses is almost completely masked. It is also a well known experience that in similar combinations of chloral with other bodies, such as urea and cyanogen, the specific action of the latter is almost completely annulled. Professor Ewald, therefore, wisely refrains from expressing a definite opinion as to the specific action of caffeine-chloral until further experiments have been made, but in the meantime the favorable results recorded should incite others to extend the experience with such a promising remedy.

Centric Origin of Neuralgia.— In the *Bull. Gen. de Ther.*, February, 1893, Dujardin-Beaumetz considers the central origin of some neuralgias.

Pain sometimes persists after section of the nerve.

Morbid irritation extends from the original nucleus of the diseased nerve to the original nuclei of other nerves, and nutritive disorders follow, *loco dolenti.*

Diathesis and blood alterations cause neuralgic pains, from resulting primary special lesions; as shown by the selection of certain nerves and the freedom of others from pain.

The neuralgic habit is often connected with hereditary neuroses, undoubtedly non-peripheral in location.

The alteration of pains is explicable on the centric theory.

Finally, he clinches his argument, by appealing to the therapeutical effects of a remedy acting on the central nuclei—bromidia; saying: "It is a matter of common occurrence that cases of neuralgia of the trigeminal, sciatic, or superficial nerves, that have stubbornly resisted the action of the various local anæthetics and different forms of counter-irritation, disappear as if by magic after only a few days' use of bromidia. This extraordinary result is readily explained by the well-known physiological effects of the active elements of bromidia. Purified bromide potassium and chloral, cannabis indica and hyoscyamus; for it must be remembered that they act on the cerebro-spinal centres. Therefore, in the great majority of cases, at any rate, neuralgic pains have a central origin, and in this way is once more verified the truth of the old Hippocratic axiom. '*Naturam morborum ostendunt curationes*,' by the use of a preparation that is now so well known as to no longer require any praise—bromidia."

Angina Pectoris. — Burney Yeo (*Practitioner*) thus summarizes the therapeutic indications:

1. Maintain nutrition, avoid strain.
2. Relieve dyspepsia, flatulence and constipation.
3. Forbid cardiac toxines, as tea, coffee, tobacco, alcohol, and all substances developing toxines in the bowels.
4. Remove gouty and other dyscrasias.
5. Increase cardiac tone and lessen tendencies to degeneration.
6. Relieve paroxysms by sedatives and [or ?] stimulants.

For the fifth indication, iron, digitalis, arsenic or strychnine may be given in appropriate cases. Gout and vascular degeneration require iodides; malaria calls for quinine; while cocaine has been recommended to prevent the attacks.

For the paroxysms, the nitrite group is useful, even when no vaso-motor spasm can be demonstrated. Diffusible stimulants, the ethers, ammonia or brandy should also be given at the onset. Cold feet should be put in hot water. Balfour, if the nitrites fail, resorts to chloroform inhalations, pouring the drug upon a sponge in a smelling-bottle. In severe and protracted cases morphine hypodermics in moderate doses. Ethyl bromide has been inhaled. Flying blisters are of value for chronic aortitis, involving the cardiac plexus. Galvanism to the vagus and to the intercosto-humeral, if there is

an aura in the hand, is useful in preventing attacks. Leeches to the sternum and repeated small venesections have also been found useful.

NOTE.—As Anstie claimed quite positively that chloroform inhalations would result in death, this remedy should be given with extreme caution, and only when the other anesthetics are not available. Counter irritation to the vagus in the neck, with some quickly acting rubefacient, has proved quite useful in several cases. Those who have obtained relief from these applications will find the "crystallized liniment" cones made by Wyeth, simply invaluable, as they can be carried in the pocket and applied instantly.

ASPHYXIA NEONATORUM.—The infant being laid upon a table or any other suitable support, the operator stands or sits at either side which happens to be most convenient, he slips the hand, which is toward the head of the child, palm upward under the back, so as to grasp the ribs and be ready to assist in compressing the chest, and expelling the air; this hand also raises the chest, and permits the head, supported by the edge of the index finger, to fall back the distance desired to make extension and raise the epiglottis The operator next grasps the legs of the infant with his other hand, back upward near the ankles; the index finger inserted between the legs serves to give a better grip.

Now by steading the body with one hand, and with the other raising and bending the legs upon themselves, and pressing the thighs upon the abdomen; the diaphragm will be pressed up into the chest and the air expelled therefrom. This operation may be assisted by making pressure upon the ribs with the fingers of the hand supporting the back.

Upon making contrary movement the air again enters the chest.—Nunn, *Southern Med. Record.*

SUMMER DIARRHEA.—If it were recognized that summer diarrhea is really a phase of cholera, summer diarrhea would be treated as such, not only as regards curative measures, but also as regards prevention, and there would therefore be a great additional safeguard.—Surg. Gen. Moore, *Provincial Med. Jour.*

FORMULÆ FOR PHENOSALYL.—

1. Phenosalyl pencil.

Phenosalyl	1 grm
Gum arabic	2 "
Flour	7 "
Glycerine and water	q. s

2. Capsules of Phenosalyl for vaginal applications.

Glycerine	75 grms
Water	25 "
Gelatine	10 "
Phenosalyl	1 "

Divided into twenty gramme capsules.

3. Gargle.

Phenosalyl	5 grms
Glycerine	25 "
Spts mint	10 "
Water	450 "

Gargle every half hour.

4. Syrup of Phenosalyl for stomach and sepsis.

Phenosalyl	0 grms 59
Spts mint	5 grms
Syrup	250 "

Dessertspoonful to tablespoonful four times a day; children one half to one teaspoonful.

—P. Grou, *Progres Medical.*

DR. EDWARD C. MANN recommends the following pill for dipsomania:

℞	Quininæ sulph.	gr. ij
	Zinci oxid.	gr. ij
	Strychninæ sulph.	gr. $\frac{1}{10}$
	Acid. arseniosi.	gr. $\frac{1}{100}$
	Pulv. capsici.	gr. ij

M. et ft. pil. no. j.
S. One pill thrice daily.

This pill is now put up, with gelatine coating, by Parke, Davis & Co.

AMONG the less common causes of insomnia, Collins (*Charlotte Med. Jour.*) mentioned arterio-renal disease, indicated by leg-cramps, increased urination, flushes and increase of arterial tension. For such a case as this, he gave nitroglycerine, plenty of pure water, with such general and intestinal tonics as the symptoms required.

RANSFORD (*Med. Times*) reports remarkable improvement in a case of pulmonary consumption, following the use of an emulsion of petroleum and hypophosphites. Notwithstanding the absence of cod liver oil, the affair has a fishy flavor.

EUCHLORINE IN DIPHTHERIA.—In the year 1887 I commenced treating diphtheria with saturated solution of "euchlorine," applying it by gargles, spray, and brush. In one case a medical man had been condemned to bed for three weeks. The throat was certainly very white with the membrane. Next morning the throat was perfectly clear, though raw, after frequent gargling during the night. Records of the successful treatment without mishap could be obtained of some two hundred consecutive cases, I doubt not. I make my patients swallow a small portion of the gargle. The aqua chlorini will not do any good I find, and it is only "euchlorine" solution with excess of potassium chlorate and hydrochloric acid that will operate successfully.

About xx gr. to xxx gr. pot. chlor. with ten minims of strong HCl will fill an eight ounce bottle with sufficient heavy yellow gas to make a good solution on shaking up with water. If the bottle is damp the reaction is useless, as the resulting gas in the solution does little good. I dilute the solution if necessary, and in some cases have neutralized the free HCl before using. The mixture can be made palatable by adding glycerine and sp. chlor., and is readily taked by children too young to gargle, by a few drops every half-hour, but it is very efficacious when used as a spray. As a gargle for children I find that a much weaker solution than the one given will do well.—Louis D. L. Ellis, *Brit. Med. Jour.*

NOT VERY HOMŒOPATHIC.—A correspondent of *The Medical Current*, records a case of post partal hemorrhage where the failing heart was kept in motion by intermittent compression, continued for nearly an hour. If this fail, he suggests that a needle be passed into the heart, to cause spasmodic contraction, when compression may be resumed.

GELSEMIUM is recommended for non-congestive facial neuralgias, hemicrania, and other neuralgias; also for ague, for ocular inflammations, chorea, tetanus, coryza, vesical tenesmus, uterine pains, to dilate the os in labor, and in asthma. —*The Alkaloid.*

HERSCHELL (*Practitioner*) describes three cases of chlorosis due to absorption of toxic substances from the intestine. No improvement followed the use of iron and laxatives. An examination of the urine showed the presence of a chromogen. The bowel was then examined, and found to be loaded with fecal masses. These were removed by enemas, and the treatment then resulted in a rapid and complete recovery. The toxic substance absorbed was in these cases skatol. He looked upon urticaria as an important sign of fecal absorption; which may also give rise to acne, chloasma, flatulent dyspepsia, etc, etc. In washing out the bowel, about a gallon of hot water should be injected, the hips being raised so as to allow gravity to favor the flow.

WEST (*Brooklyn Med. Jour.*) enumerates a number of instances in which the coal-tar derivatives were taken with toxic results; in some cases fatal. In his own experience, West noted great cardiac weakness follow the use of antipyrin, in doses of five grains every four hours. An erythema followed the use of antipyrin twice, and a morbilliform rash appeared after antipyrin once, after acetanilide twice, and once after phenacetine; all in moderate doses. These experiences show that great care should be taken in prescribing these valuable drugs.

APERIENT PILL OF SUMBUL.—

℞ Ext. sumbul. . . . . gr. j
Asafetida . . . . . gr. j
Ext. cascara sagrada. . . . . gr. ss
Aloin. . . . . gr. $\frac{1}{10}$
Ext. nux vomica. . . . . gr. $\frac{1}{8}$
Gingerine. . . . . gr. $\frac{1}{4}$

M. ft. pil. no. j.
S. Dose, one or two pills.

—Shoemaker, *Med. Bulletin.*

BARR (*Lancet*) has treated 103 cases of typhoid fever, with three deaths. His method has been described in this journal. He places his patient in a continuous bath, and gives salol and bismuth salicylate as intestinal antiseptics, with caffeine for nervous depression or atonic pulse. He sprays the bed-room with peroxide, and gives but little alcohol.

PILOCARPINE is an efficient remedy for acute suppression of urine: gr. $\frac{1}{60}$ to $\frac{1}{30}$. —*The Alkaloid.*

PRESCRIPTIONS, FROM *The Practitioner*.

—For functional headache:

℞ Liquoris strychninæ hydrochloratis . . . . . ♏ v
Tincturæ ferri perchloridi . . . ♏ x
Acidi phosphorici diluti . . . ♏ vj
Aquæ destillatæ ad . . . . . ℥ss
Misce et fiat mistura.
Sig. A tablespoonful three times daily after food.

For myalgia:

℞ Linimenti chloroformi.
Linimenti aconiti aa . . . . . ℥iv
Tincturæ opii . . . . . ℥iij
Linimenti saponis ad . . . . . ℥iv
Misce et fiat linimentum.
Sig. To be well rubbed into the painful parts.

A tonic in convalescence from acute pulmonary disease:

℞ Ammonii carbonatis . . . . . gr. iv
Tincturæ nucis vomicæ . . . . ♏ v
Spiritus chloroformi . . . . . ♏ v
Infusi quassiæ ad . . . . . ℥j
Misce et fiat mistura.
Sig. Two tablespoonfuls to be taken three times daily, shortly before meals.

A cardiac tonic in pill form:

℞ Quininæ sulphatis . . . . . gr. ij
Pulveris digitalis foliorum . . gr. ss
Extracti lupuli ad . . . . . gr. iv
Misce et fiat pilula.
Sig. One pill three times daily.

For chorea:

℞ Syrupi ferri bromidi (U.S.P.) . . ℥ss
Aquæ floris aurantii . . . . . ℥ss
Misce et fiat mistura.
Sig. Two teaspoonfuls in water, three times daily after meals.

For the pains of chronic rheumatism:

℞ Acidi arseniosi . . . . . gr. iii
Pulveris guaiaci . . . . . ℥iii
Pulveris capsici . . . . . ℥ss
Pilulæ aloes et asafœtidæ . . . ℥iii
Divide in pilulas cxx.
Sig. One pill thrice daily.

To allay the craving for alcohol:

℞ Tincturæ capsici . . . . . ℥ii
Tincturæ nucis vomicæ
Acidi nitrohydrochlorici diluti aa ℥i
Infusi gentianæ ad . . . . . ℥xii
Misce et fiat mistura.
Sig. Two tablespoonfuls as often as required.

For the painful constipation of plumbism:

℞ Podophyllini
Extracti nucis vomicæ
Extracti belladonnæ . . . . aa gr. ii
Divide in pilulas x.
Sig. One pill twice or thrice daily.

To allay cough in pertussis:

℞ Extracti belladonnæ . . . . . gr. i
Aluminis . . . . . ℥ss
Syrupi zingiberis
Syrupi acaciæ
Aquæ . . . . . aa ℥i
Misce et fiat mistura.
Sig. A teaspoonful thrice daily, or when the paroxysmal cough is distressing.

For megrim:.

℞ Butyl-chloral hydratis . . . gr. xv
Tincturæ gelsemii . . . . . ♏ xxx
Tincturæ cannabis indicæ . . ♏ xv
Glycerini . . . . . ℥iv
Aquæ ad . . . . . ℥iij
Misce et fiat mistura.
Sig. A third part at once; to be repeated in half an hour.

For excessive thirst in diabetes:

℞ Pilocarpinæ nitratis . . . . . gr. iii
Spiritus tenuioris . . . . . ℥i
Aquæ ad . . . . . ℥ss
Sig. Four or five drops on the tongue twice or thrice daily.

For chronic eczema:

℞ Acidi salicylici . . . . . gr. xxx
Zinci oxidi . . . . . ℥vi
Pulveris amyli . . . . . ℥vi
Vaselini . . . . . ℥iss
Sig. The paste to be applied daily, and not to be washed or rubbed off.

A chalybeate lemonade:

℞ Tincturæ ferri perchloridi . . . ℥iv
Acidi phosphorici diluti . . . . ℥iv
Tincturæ limonis . . . . . ℥ii
Syrupi simplicis ad . . . . . ℥vi
Sig. Two teaspoonfuls of the syrup in a small tumblerful of water after meals.

An agreeable salicylic mixture.

℞ Potassii acetatis . . . . . ℥ii
Acidi salicylici . . . . . ℥ss
Syrupi limonis . . . . . ℥ii
Aquæ menthæ piperitæ ad . . ℥viii
Sig. One tablespoonful every three hours.

Snuff for recent coryza.

℞ Morphinæ hydrochloratis . . . gr. ij
Pulveris acaciæ . . . . . ℥ij
Bismuthi subnitratis . . . . . ℥vj
Misce et fiat pulvis.
Not more than a quarter of this quantity to be used in the twenty-four hours.

For lichen ruber:

℞ Acidi carbolici liquefacti . . . ♏ xx
Hydrargyri perchloridi . . . . gr. ss
Unguenti zinci . . . . . ℥x
Misce et fiat unguentum.

Anthelmintic draught:

℞ Olei terebinthinæ . . . . . ℥iss
Misturæ amygdalæ . . . . . ℥iss
Misce et fiat haustus.

Dr. Geo. J. Engelmann writes thus in *The Med. Fortnightly* of his recent studies in faradism. The results obtained, in brief, are as follows:

1. The proof of the importance of a hitherto entirely neglected element—*rapidity of vibration*, or rate of interruption of the primary galvanic flow, which is one of the most essential features in determining the value and the physiological, as well as mechanical effect of the faradic current; the knowledge that these interruptions must be of a far greater range than hitherto used for medical purposes, as by their frequency they determine physiological as well as mechanical effects.

2. That I have been enabled to indicate the value of secondary coils of varying construction in determining varying physiological effects, effects which depend in the main upon quantity and electro-motor force of the coil or *resistance* and the *number of winds*, which must be indicated.

3. That *absolute measurement* of the faradic current is possible, but is *in no way indicative* of *physiological* effect, hence the necessity of approximating measurement by *a record of the essential details*.

4. I have been enabled to demonstrate some peculiar physiological and mechanical effects from one pole, which resemble those of static electricity, and which I call the *high tension, single wire effects*.

First. It is upon current-interruption that I lay the greatest stress. The utilization of interruptions of far greater rapidity than hitherto known, up to 50,000 and 100,000 per minute, as giving a far greater scope to the therapeutic use of the faradic current, and, above all, securing sedative, not to say anæsthetic, effects hitherto unknown. But all-important is the *exact determining* of the number of interruptions used, as being indicative of both physiological and mechanical effect; the number of interruptions controlling the current-effect to such an extent that an increase of a few thousand interruptions per minute may completely efface the effects of a certain current hitherto obtained.

Cantani, the great author and teacher, died May 1st, of nephritis, at Naples.

News and Miscellany.

Dr. Traill Green, of Easton, received quite an ovation on his 80th birthday, April 25.

The *Hot Springs Medical Journal* puts in a bid for the next meeting of the American Medical Association.

The Melbourne Hospital has been compelled to cut down expenses on account of the Australian bank collapse.

"Professor" Van Angelback was sentenced, at Des Moines, to one year in jail, and fined $400, for selling fraudulent diplomas.

The Brooklyn Home for Habitues, Dr. J. B. Mattison, Director, has been removed to 188 Prospect Place, near Prospect Park.

Arkansas has repealed her medical law, and now requires only the registry of a diploma by a county clerk, to legalize practice.

Dr. G. Betton Massey will open a summer annex to his Sanatorium at Paoli, Pa., June 1st, to remain open during the hot months.

Leigh French, son of Dr. G. F. French, of Minneapolis, saved a $500,000 Chicago heiress from a proposed English husband by eloping with her. Good boy!

Changes in the Medical Corps of the Navy for the Week ending May 27, 1893.—Medical Inspector J. M. Flint, ordered to the U. S. S. Baltimore; Medical Inspector G. W. Cooke, detached from the U. S. S. Baltimore, and three months leave; Surgeon C. G. Herndon, to duty in the Bureau Medicine and Surgery; Surgeon W. A. McClurg, from duty in Bureau Medicine and Surgery and wait orders; Pd. Assistant Surgeon G. T. Smith, detached from New York Hospital and to U. S. S Baltimore; Pd. Assistant Surgeon S S. White, detached from U. S. S. Baltimore and two months leave; Pd. Assistant Surgeon F. H. Bryant, detached from Philadelphia Hos-

pital and to U. S. S. Baltimore; Assistant Surgeon M. R. Pigott, detached from U. S. S. Baltimore and to U. S S. Kearsarge; Assistant Surgeon A R. Alfred, detached from U. S. S. Kearsarge and one month leave; Assistant Surgeon B. R. Ward, detached from U. S. S. Richmond and to U. S. S. Monongahela; Pd. Assistant Surgeon Oliver Diehl, ordered to Naval Hospital, Philadelphia, Pa.; Pd. Assistant Surgeon E. S. Bogert, detached from Laboratory, New York, and to U. S. S. Philadelphia; Assistant Surgeon Robert Boyd, detached from U. S. S. Philadelphia and to U. S. S. Richmond.

THE MODEL PHYSICIAN.—He attends the medical society; has ample time for visiting his own patients; he gives them conscientions and faithful service; he subscribes and reads his home medical journal and a number of other journals; he buys such books as will enable him to keep abreast with the times; he always speaks kindly of other doctors; he finds but little time to become jealous and criticise, knowing that all men are fallible and that doctors are not an exception to the rule; he has but little to say of what seems to him a mistake on the part of his brother practitioners; he is fair and honest to doctor and patient, when called in consultation; he makes no mistake by studiously avoiding what is so commonly seen manifested on the part of that class of doctor's patients as to be constantly making inquiry as to how they are getting on, and who make false expressions of great sympathy and consideration for the afflicted who may be under the treatment of another doctor; *he never steals a patient.* But excuse us, the model physicians, we are happy to say, are largely in the majority in every community, and while much has been said about quacks, frauds, dishonest and designing men, we must not be misunderstood. The true, sincere and fair-minded, the faithful, conscientious physicians who make it a rule to attend to their own legitimate business, and who prosecute their work faithfully, are the ones who will control medical affairs, and they are, we repeat, largely in the majority in every city and town, especially in Alabama.—*Ala. Med. & Surg. Age.*

The Indiana State Medical Society met in its forty-fourth annual session at Indianapolis, May 11th, 1893. The President, Dr. Geo. F. Beasly, of Lafayette, was in the chair and opened the meeting with a few remarks. Two hundred members were present at the opening meeting. The Secretary, Dr. E. S. Elder, reported a prosperous condition of the society during the past year. Reports came from seventy-two auxilliary societies, with a total paying membership of 1,227. The report on necrology was made by Dr. James F. Hibberd, of Richmond. Twelve have died during the year past, among them Drs. Wiles, De Bruler, Severance, Porter, Yohn, Spaulding, Wright, Shrively and Loman. A discussion was had as to the advisability of dividing the society into two sessions, one general medicine and one general surgery, but it failed to pass, as did also the suggestion that certain gentlemen be appointed to read papers on certain subjects and others to discuss these subjects. It seems that there are too many papers presented and some of them not of sufficient merit to warrant taking the time of the society. A member suggested that there was not sufficient nerve displayed in refusing papers lacking in merit. The President in his address said, after discussing the code, that it would be difficult to change it for the better. He complained that that part of the code which forbids the use of secular papers to report cases was a dead letter. No class get more free advertising than do the doctors. They do not pay for it, they give it in as news, but it is advertising. The doctor then turned his attention to higher medical education and the multiplication of doctors and colleges. The election of officers resulted as follows: President, Dr C. E. Daugherty, South Bend; Vice-President, Dr. T. H. Leech, Crawfordsville; Secretary, Dr. E. S. Elder, Indianapolis; Assistant Secretary, A. S. Shipman, Seymour; Treasurer, J. O. Stillson, Indianapolis. The meeting adjourned to meet the first Thursday in May, 1894, at Indianapolis.. Three hundred members registered and the meeting was considered one of the best in the history of the society.

In answering advertisements, please mention THE TIMES AND REGISTER.

The Times and Register.

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Original Articles.

TWO CASES OF AMPUTATION AT SHOULDER-JOINT IN WHICH WYETH'S PINS, TO CONTROL HEMORRHAGE, WERE USED.[1]

By JOHN H. BRINTON, M.D.,

PHILADELPHIA.

CASE 1. *Osteitis deformans of the leg, followed at the expiration of twenty-three years by sarcoma of the humerus; amputation at shoulder-joint by the oval method; use of Wyeth's pins to control hemorrhage; death on the tenth day:*—E. B., aged forty-eight years; born in Massachusetts; publisher. About twenty-three years ago he noticed tenderness over the right tibia, increased by pressure, by severe or prolonged exercise, and by barometic changes. Various anti-rheumatic measures were employed, but without avail. The limb did not become much worse; he was able to be about and follow the business of his life for years. During this time he was not lame, but experienced a sense of weakness in the limb. To use his own expression, "he favored that leg." In the course of years the bones of the leg had gradually increased in thickness, and had become curved. About ten years ago he consulted the late Prof. Agnew, who told him that he could do nothing to relieve his slight disability of the limb, and that the affection was incurable. About three years since he consulted me, but I could add nothing to what had been already said, and could suggest no treatment.

In November, 1891, the patient consulted me for a fracture of the body of the left scapula. This resulted from a fall backward, as he was descending from the step of a railroad car, the scapula striking the edge of a projecting board or plank. This fracture healed rapidly and well.

In June, 1892, in jumping from a street car while in motion, and while his hand grasped the railing, he experienced great pain just below the right shoulder, and felt that the arm was broken. He came directly to my office. On examination, I detected crepitus, diagnosticated fracture of the anatomical neck of the humerus, and treated him for that injury. Union took place quickly, and full use of the limb was obtained. The only noticeable feature in this injury was the

[1] Read before the Philadelphia Academy of Surgery, April 3, 1893.

occurrence of slight pain referred to the outside of the humerus, about the lower portion of the upper third. There was at that time no enlargement of the bone at this locality.

On September 19, 1892, the patient again consulted me, stating that a "lump" had appeared on the outside of the humerus at its upper part. I examined the arm and found distinct cylindrical enlargement of the humerus, obviously a sarcoma of the bone, and I stated this to the patient, advising him to consent to the removal of the limb at the shoulder-joint, if the diagnosis should be confirmed by a preliminary incision. At the patient's request, Drs. Packard and John Ashhurst saw the case in consultation, and they agreed with me in the propriety of immediate operation. From a careful examination of the patient's entire clinical history, there was no doubt in our mind that the case was one of osteitis deformans, first described by Paget, and which had been followed, as is so often the case, by the development of a malignant growth.

The operation was fixed for October 5, 1892, but at the preliminary shaving of the axilla, and preparation of the limb, or by the patient's lifting of the limb, fracture, which may fairly be regarded as spontaneous and non-traumatic, occurred, as was made evident at the time of operation, done in the presence and with the assistance of Drs. Keen, Ashhurst, Packard, and others.

To prevent hemorrhage, the long steel pins of Prof. Wyeth were inserted by Dr. Keen, the anterior one transfixing the anterior axillary fold in front of the vessels, penetrating the tendon of the pectoralis major muscle, and emerging near the end of the acromion.

The posterior needle pierced the deltoid and emerged just below the acromion. By carrying the needle, especially the anterior one, well upward, the constricting rubber band was placed so high as not to prevent the rotation of the humeral head, or to interfere materially with its disarticulation.

This patient suffered very slight loss of blood at the time of the operation, and received but little shock. He reacted promptly and perfectly, and for several days did well, the wound uniting throughout. On the night between the fifth and sixth day the temperature rose to 104.5°, and a copious eruption, similar to that of measles, appeared on the abdomen and chest, and eventually invaded the extremities, and indeed the whole body. There was marked coryza, and the tongue became brown and dry.

This condition resisted all treatment and the free use of antipyretics. As the eruption spread, the temperature still rose, reaching 107.5° and 108,° and the patient died on the afternoon of the 15th of October, the tenth day after the operation. The intellect remained clear until within an hour or so of the end.

I cannot but regard the death as due to some form of septic infection not easy to determine.

It is unnecessary to add that the antisepsis was observed in the treatment before, during, and after the operation.

The specimens, showing the sarcoma of the shaft of the humerus, and the peculiar indented fracture of its head and anatomical neck, are before this Academy. I particularly desire the observation of the Fellows to the fracture, which appears to me to have resulted from violent impact of an infiltrated diseased caput humeri against the edge of the glenoid cavity.

Case II.—*Amputation at shoulder-joint for enchondroma of humerus.*—The other case of shoulder amputation, in which I used Wyeth's pins, was that of a boy (I. B.), from Vermont, ten years of age. Nearly a year previously a tumor, apparently an enchondroma, began to develop on the inner side of the humerus, close to the head of the bone. It eventually grew until it attained a diameter of two and a half inches. It was painless, but interfered with the joint-motion by its bulk. The boy was brought to the clinic of the Jefferson Hospital, and after consultation with my colleagues, I determined to remove the arm at the shoulder.

This was accordingly done on the 28th of November, Wyeth's pins being first introduced by my colleague, Professor Keen. The anterior pin was made to emerge three-quarters of an inch above the tip of the acromion. As a result the circular turns of the tubing rested on a somewhat higher level than in the preceding case. Perfect freedom of the joint was preserved, and its disarticula-

tion was not unimpeded. Previous section of the bone with the saw, as directed by Professor Wyeth, was not necessary. A roller bandage was applied as a compress under the tubing and directly over the artery. Hemorrhage was thus perfectly prevented, and the removal of the limb, as in the former case, was practically a bloodless procedure. This boy recovered without accident.

I may state that in both these instances an Esmarch elastic bandage was applied previous to the insertion of the pins.

DISCUSSION.

Dr. William W. Keen: I would call attention to the control of hemorrhage by Wyeth's method. This afforded perfect hæmostasis. I never saw anything better, and as compared with the method which I devised myself a few years ago, by a compress over the subclavian artery, I think that it is vastly superior. In the first of Dr. Brinton's cases the pins were brought out at the end of the acromion process, and when the head of the bone was removed the skin slipped down and the constriction of the tube partially obliterated the cavity where the head of the bone had been. In the second case, the pins emerged three-fourths of an inch from the tip of the acromion, and there was no trouble from the slipping of the tube downward.

Dr. John B. Deaver: How much blood was lost in these cases?

Dr. Brinton: In the first case there was a little blood lost on account of the slipping of the rubber tube—perhaps two ounces. In the second case there was practically no blood lost.

Dr. Deaver: I have had no experience with the Wyeth pins in amputation at the shoulder joint. I have relied upon good assistance and have never seen much bleeding. There is no doubt that the method described is an excellent one, and the only question in my mind was whether the presence of the tube did not interfere with the manipulation in disarticulating. In the few chronic cases on which I have operated all have recovered.

Dr. James M. Barton: Unless there is some tumor encroaching upon the joint, interfering with the manipulation, I am in favor of an assistant grasping the artery as the flap is divided. Some years ago I saw a case of large sarcoma of the head of the humerus perish from hemorrhage on the table. The pins under such circumstances would have saved life.

Dr. W. W. Keen: I think that there is no possible doubt that the tube does not interfere with the manipulations, but that it assists us in making them. You have absolute confidence in your hæmostasis which you cannot have in any assistant whose arm or thumb is apt to get tired.

Dr. H. R. Wharton: I have not had any experience with Wyeth's pins in shoulder-joint amputation, but I can see how the method should be very useful, although I have not seen much bleeding where they have been good assistants. In my experience the most blood has been lost in the preliminary incisions. The only point would be in regard to the interference with the disarticulation if the tube slipped. I have seen Dr. Agnew use a pin under the vessels with a ligature above, which controlled the hemorrhage very satisfactorily.

The President: Some years ago I used the Esmarch tube in the of a figure of eight in amputation at the shoulder-joint with perfect success. An assistant held it up when there was any tendency to slip.

ENTERECTOMY FOR OBSTRUCTIVE EPITHELIOMA AT THE ILEO-CÆCAL VALVE. SECONDARY ANASTOMOSIS. OPERATION BY ABBE'S LONG INCISION.

By JAMES M. BARTON, A. M., M. D.
[Surgeon to the Jefferson College Hospital and to the Philadelphia Hospital.]

I SAW Mr. B. for the first time, on April 18, 1892, at Millville, N. J., in consultation with Drs. Smith and Newell. He was in bed, was very pale and thin, and had frequent attacks of sharp pain while we were talking to him. I obtained the following history. He was twenty-seven years of age, and had been in his usual health until the first of January, when he had an attack, similar to the present one, lasting one week. From then until the latter part of March he was able to attend to his work in the glass house, but was troubled with some pain and considerable tenesmus. He went to the water closet from four to eighth times daily, passing, with difficulty, a few small scybala each time. His constipation increased until four

weeks ago he had several attacks of complete obstruction, each lasting four or five days, and only relieved after taking many purgatives.

He now has and has had for the last two weeks about four diarrhœic passages daily. He has severe attacks of cramp in the right iliac fossa every few minutes, requiring the constant use of large doses of morphia. These attacks are accompanied by a half inch elevation of the abdominal walls over the painful point. As the pain leaves, the abdominal wall descends, and gurgling of wind is heard and felt. He has been confined to his bed for two weeks and is greatly exhausted. There is no elevation of temperature, no tenderness on pressure, and there is no tumor felt, though carefully searched for. There has been no vomiting at any time.

From the absence of vomiting and the marked tenesmus present, I regarded the obstruction as being in or near to the beginning of the large bowel; that it was not far from the ileocæcal valve was shown by the elevation of the abdominal wall at this point by the obstructed gas. The diarrhœa was an evidence of an intussusception, and the very short time the symptoms had existed, and the very complete obstruction present, pointed to a malignant growth as the cause of the intussusception.

Two days later I again visited Millville for the purpose of removing the growth. I was assisted by Drs. Newell and Smith, of Millville; Dr. Jones, of Camden; and Mr. Borsch, a student at Jefferson College. An incision about three inches long was made in the right iliac fossa, similiar to the incision made in removing the appendix. On introducing the finger the growth was found at once. The intussusception could not be reduced as the epithelioma had grown since it had occurred. After incising the bowel to verify the diagnosis, I removed about six inches of the intestine, including the obstructing epithelioma. Preparations had been made to perform lateral anastomosis at once, but the patient was so severely shocked that the operation was terminated by a temporary artificial anus.

He recovered without difficulty, gaining rapidly flesh and strength, and came to me, in Philadelphia, in June, to have the anastamosis operation performed. I placed him in a private room in the Jefferson College Hospital, and on the 16th I operated, assisted by Drs. Ashton, Fisher, Mr. Borsch, and the house staff. My purpose was to make a long opening by the method devised by Dr. Abbe, between the lowest possible portion of the ileum and the highest and most convenient portion of the colon; to permit the artificial anus to remain as a safety valve and only close it after the anastomosis opening worked satisfactorily. In order to determine where to make my incision, probed the bowel at the artificial anus, some days before the operation, and with various sounds and catheters, and found it ran directly across the abdomen to the left iliac fossa. As I could not hope to join this to the acending colon, I decided to use either the transverse colon or the sigmoid flexure, and to open the abdomen by a short incision to the left of the left rectus, as being within reach of both these portions of the large bowel and directly over the portion of the small bowel I wished to use but far enough from the artificial anus to escape the risk of infection. This was an error, the incision should have been made in the median line, rather higher than I did make it and long enough to get a fair view of the intestines.

Just before opening the abdomen I introduced a sound into the artificial anus, so that I might be able to verify, without delay, the portion of the ileum I wished to use after the abdomen was opened.

A three-inch incision was made about two inches to the left of the median line and parallel with it, ending just above Poupart's ligament. The ileum, with the bougie in it, was readily identified, and as the transverse colon hung well into the wound, the sigmoid flexure was not searched for. After stripping the portions of the bowel I intended to use of their contents, and preventing their return by a temporary rubber ligature, the ileum and colon were laid side by side and joined by a line of suture five inches long; when completed the needle was removed and the unused thread permitted to remain. A second line of suture, four and a half inches long, parallel and close to the first, was introduced,

and the unused threads were also permitted to remain.

Both bowels were then opened by a four-inch incision about a quarter of an inch from the last suture. A third suture was used to join the edges together, passing each stitch across the freshly divided edges so as to check the bleeding. This stitch is known among seamstresses as a "whipping stitch." The pliability of the intestines is such that not only the distal edge can be so closed, but a large portion of the edge on the side of the incision toward the operator. A needle was now placed on the unused thread attached to the second line of suture, and this was continued around the ends and in front of the opening, joining the intestines together at about a quarter of an inch from the opening and parallel to it. This suture, when completed, entirely surrounds the opening, and is about a quarter of an inch from it. Lastly, the unused thread of the first suture, which was still hanging at the end, has a needle put on it, and it is carried around the ends and in front of the opening. This suture when completed also surrounds the opening and is about half an inch from it.

The operation can be quite rapidly performed, the intestines being held in contact, by an assistant. After the first line of stitching is made it is still easier, and the suture can be made nearly as fast as the same operator would sew a seam in muslin.

The whole operation was performed with a constant stream of tepid boiled water flowing over the intestines we were joining together. As soon as the stitching was completed the intestines were replaced in the abdominal cavity, which was thoroughly flushed, and as the sutured intestines laid in position without undue strain, the abdomen was closed.

The slight vomiting after the ether soon ceased. A number of ounces of fecal matter passed from the artificial anus, but less than before the operation. At the expiration of twenty-four hours there was occasional regurgitation of fluid from the stomach and when I saw him at 8 o'clock on the second morning, the regurgitated fluids had become coffee-colored. An hour later, forty-three hours after the last operation, I reopened the wound, but failed to find the cause of the obstruction. The sutured intestines laid quite stiffly in place, being kept so by the numerous lines of sutures and the resulting plastic deposit, the small intestine was rather sharply flexed at the extremity, but not enough to obstruct. After as full a search as the condition of the patient warranted, it was concluded that the obstruction must be at the sutured portion. A loop of the ilium above the anastomosis was therefore drawn into the wound and another artificial anus made, but the obstruction was unrelieved, neither gas nor fecal matters passed, and the patient died forty-eight hours later, or four days after the operation.

At the post-mortem there was no evidence of recent peritonitis anywhere, the cause of all the difficulty being an old adhesion of the ilium to the abdominal wall at the left iliac fossa. Trailing the ilium up from the original artificial anus in the right iliac fossa, it ran directly across the abdomen to the point of attachment in the left iliac fossa, making a tense band; it then ran downward, and six feet were in the pelvis. I had drawn about two feet of these six under the band and used them for the anastomosis operation. The remaining four feet, still in the pelvis, were sloughing, its circulation being entirely shut off by the band. All the parts above the band, including the intestines used in the anastomosis operation, were in admirable condition. The immediate cause of the obstruction was the increased tension of the band, produced by pulling another loop of intestine under it at the operation. This band would probably have given trouble even if the anastomosis operation had not been performed.

The result in this case has not made me feel dissatisfied with the operation. I still think that it is the only tried method of obtaining a sufficiently large opening between intestines. Any smaller opening, no matter how made or with what devices, will be apt to contract and obstruct.

The Abbé operation can be quiet rapidly performed. In the case above narrated, the patient suffered from no appreciable shock, though he had but recently recovered from a nearly fatal illness.

In performing this operation again I should make the incision in the median line, and make it higher and longer, so that I might not only see the condition of the intestines, find any abnormal adhesions, but before joining the intestines I should place them in position in the abdominal cavity so that they might lie without strain or tension. The intestines, when joined by six lines of sutures, are as unyielding as if there were a piece of card-board between them five inches long. If the intestine does not lie easily in its new position, the bowel at one end or the other of the stiffened portion may be so sharply flexed upon itself as to cause obstruction. In addition, from the same cause, there may be unnecessary strain upon the sutures.

The sutures in the above case were severely tested, the transverse colon was pulled upward by the gastro-colic omentum, while the ilium, a few inches below the suture, was fast anchored by the adhesion. This strain was greatly increased by the subsequent abdominal distention and frequent vomiting. But as the specimen, which I here exhibit, shows, it held perfectly.

The specimen removed at the enterectomy shows almost complete obstruction, the opening that remains being less than a quarter of an inch in diameter.

DISCUSSION.

Dr. W. W. Keen: The question of contraction again comes up. I have a patient on whom I did a gastro-enterostomy a year ago, making an opening only an inch and a half in length. He is still perfectly comfortable. But in spite of such a result in a single case I believe that the long incision advocated by Abbé is the right one.

Mr. Treves has a brief article in a recent issue of the *Lancet*, reporting a case in which he removed a portion of the sigmoid and brought the bowel together end to end in a very simple way. He first sewed the mucous membrane of one end to that of the other all around, and then inverted the peritoneum with a simple Lembert suture. The operation was done in a comparatively short time and the patient recovered beautifully.

INDIVIDUAL EXPERIENCE IN THE TREATMENT OF VESICAL CALCULUS.[1]

By JOHN ASHHURST, Jr., M. D.

I FIND in looking over my records that I have removed calculi from the human body in fifty-one cases. One case was that of a female child, on whom I performed lithectasy, or rapid dilatation of the urethra, but the remaining fifty were in male subjects. In thirty-five of these fifty cases the patients were operated on by lateral lithotomy, which is the cutting operation that I prefer. I recognize that there are cases in which the median operation is to be preferred, and that there are other cases in which the supra-pubic operation is the best, but where the surgeon has the choice of operation, I think that he should select lateral lithotomy. Of the thirty-five cases operated on by the lateral method, twenty were in children under the age of puberty, and in every case the patient recovered. In males beyond the age of puberty, including a fair proportion of quite old persons, I have had fifteen cases with three deaths, but only one of these three was really the result of the operation. That occurred in a case operated on in a neighboring town this winter. Secondary hemorrhage occurred on the ninth or tenth day, and the attempts made by the attending physician to control it were not successful.

I have six cases of the median operation, with one death, to report. In one case the operation was done for the removal of a foreign body, the end of a catheter. In this case I succeeded not only in removing the foreign body, on which there was a small calcareous deposit, but also in relieving the chronic retention of urine, from which the patient had long suffered, by tearing off the median lobe of the prostate with the forceps. This was fully ten years ago; the patient is still living, and I believe has not had occasion to use a catheter since. The case which proved fatal was in a patient in the last stages of cystitis and chronic renal disease, and in which the presence of the stone was simply a complication. An interesting feature in this case was that, in addition to the presence of the stone, there was a large quantity of that

[1] Read before the Philadelphia Academy of Surgery, May 1, 1891.

semi-organized material which has been described by Vandyke Carter as the animal basis of calculi.

I have one case of the supra-pubic operation, in which the stone was a small one, this particular operation being chosen because the case was really one of villous tumor of the bladder, and the presence of the stone was simply a complication. The patient was in a critical condition from hemorrhage at time of the operation, but made a good recovery.

I have no case of the old-fashioned lithotrity. The operation had already come to be rarely practiced before I had occasion to resort to the crushing method. The early portion of my practice was largely with children, and Bigelow's modification had already become the operation of preference when I first felt I had a case adapted to its performance. I have performed this operation eight times, with six satisfactory recoveries and two deaths. Both the deaths were from uræmia, dependent upon chronic disease of the kidney.

I have brought here a number of the calculi which I have removed. The largest weighs three ounces and some drachms. It was removed by the ordinary lateral operation. It was not necessary to enlarge the wound by dividing the right side of the prostate, nor was it necessary to crush the stone. By making a large external wound, by grasping the stone with sufficiently powerful forceps, and by patience in manipulation, this stone was removed without difficulty, and the patient made an excellent convalescence.

The largest number of stones which I have removed from one patient is fifty-four. These were removed by lateral lithotomy. The patient made a good recovery, but returned in a year or so with recurrence of the symptoms from a descent of more stones from the kidney. On that occasion I determined to perform the operation of litholapaxy. The patient did pretty well for a few days, but then the urine became turbid, containing a large quantity of ropy mucus and pus, uræmia developed, and the patient died in convulsions. This was a forcible illustration of the risk attending litholapaxy in cases of cystitis, and since the occurrence of that case I make it a rule, where the patient presents cystitis in an advanced degree, to recommend the cutting rather than the crushing operation.

With regard to the results that I have reached from my own experience, I would say, in the first place, that I have never seen any reason to wish for a better operation than lateral lithotomy in children. Litholapaxy has been resorted to successfully a number of times, and with the improved instruments which we now have the operation is a feasible one, while it could hardly be considered such a few years ago. Until within a short time it has not been possible to get instruments of sufficient strength and delicacy for use in the urethræ and bladders of children. Even now, the operation of litholapaxy in children seems to me to be a more severe one than lithotomy. The results of cutting for stone in children are so satisfactory that I think we want nothing better. The great advantage of litholapaxy it seems to me is the short time required for after-treatment. If all goes well, litholapaxy will allow the patient to go about his business in five or six days. This is a great advantage in adults who are engaged in active business; but in young children it is a matter of no importance. At the same time I am willing to admit that the operation has been improved to such an extent that it is one which may be legitimately resorted to in children if the surgeon thinks that it is preferable.

The median operation seems to me to have a very limited field. Cases of foreign body in the bladder, and cases of very small stone, are those to which this operation is adapted. In some of my cases the operation was not begun with the knowledge that a stone was present, but for retention of urine where it was not possible to pass an instrument by the urethra. The argument which has been advanced in favor of this operation, that it is attended with less risk of hemorrhage, does not seem to be entirely well founded. There is very little more risk in the lateral operation. The transverse perineal artery is divided, but with a little care it is not likely that the internal pudic or the artery of the bulb will be injured. In the old days of oper-

ation without an anæsthetic, it was quite possible that one of these arteries might be wounded in the struggles of the patient. The artery of the bulb can be avoided by striking the staff as far back as possible. The hemorrhage from which I have had trouble has been from the prostatic plexus of veins, and this is quite as likely to occur in the median as in the lateral operation, and, indeed, I have seen very profuse hemorrhage from this source after median section.

The supra-pubic operation, although just at present the fashionable method, I should reserve for very large stones, or for cases in which there was some complication, such as tumor, in addition to the stone. Cases of vesical tumor are more satisfactorily dealt with through the supra-pubic incision, but where the case is an uncomplicated one of stone, I have not seen any reason to prefer this to the lateral method.

In the female, the operation of lithectasy or rapid dilitation is the one to be chosen, and in almost all cases will be sufficient. Mr. Bryant has shown that stones of considerable size can be removed by this method. In children, stones up to half an inch in diameter, and in adults stones up to one inch in diameter, can be thus removed. If the stone is larger, it can be broken into several fragments before removal. I believe that the results of this method will be more satisfactory than if an attempt is made to remove the calculus by litholapaxy or by any form of lithotomy. The vesico-vaginal section may leave a permanent fistula. The high operation may, of course, be required for very large stones.

As regards the operation of lateral lithotomy, the points which are to be observed are, in the first place, to make a large external wound. I have seen very serious trouble result from too small an external incision. There is no objection to a large wound through the skin and superficial fascia; if hemorrhage occurs, it is easier to deal with it through a large wound, and drainage is more satisfactorily effected. In the second place, I think that it is of great importance to strike the staff as far back as possible. Instead of striking it where it is most superficial, I endeavor to get as far back toward the horizontal portion of the staff as possible. In that way you avoid wounding the artery of the bulb, and obtain plenty of room where it is needed. My preference is to have the staff firmly hooked up under the pubis, instead of having it made to project in the perineum. I believe that in this way it is more firmly held, and that the surgeon can fix the position of the anatomical points better, and therefore cut with more precision. Having struck the staff, I think, following the advice of Sir William Fergusson, that the deep incision should be made small. I believe that there is a decided advantage in this plan. I do not say that the surgeon should not make the wound in some degree proportionate to the size of the calculus, and in cases where there is a large stone, I am in the habit, as I withdraw the knife, of bringing it slightly away from the staff so as to enlarge the deep wound. In children the knife should be withdrawn in close contact with the staff; but in the adult I drop the knife a little, so as to enlarge the wound in the prostate. The finger is then introduced, and the prostatic enlargement completed by dilatation. I do not at all agree with the view of Mr. Teevan, that it is safer to cut the prostate than to stretch it. In the introduction of the finger, I lay stress on its introduction above the curve of the staff. In children this is very important, for if it is not done, the finger may not enter the bladder, but may pass into the recto-vesical space. The surgeon cannot miss the bladder if he passes the finger above the staff, as it is well held up under the pubis.

In my earlier operations I had a great fancy for the scoop in removing calculi, using it as the obstetrician uses the vectis, getting the scoop behind the stone and the finger in front of it, and bringing all out together. Of late years I have used the forceps more and the scoop less, although at times it answers a useful purpose. In the withdrawal of the stone a mistake that I have often seen made is in not carrying the forceps far enough backward toward the coccyx. The portion of the wound where there is plenty of room is far back. I have seen surgeons try unsuccessfully to remove the stone through the anterior portion of the wound, when it could have been readily

removed if the forceps had been dropped toward the back.

In the high operation it is a great advantage to have the bladder and the rectum distended, though, perhaps, not absolutely necessary. There is an advantage too, in lateral lithotomy, in having a moderate quantity of fluid, say about four ounces, in the bladder before the operation, as the gush of water, when the bladder is opened, will bring the stone down on the end of the finger. If, however, the bladder is so intolerant, I do not care to have it much distended.

With regard to the operation of litholapaxy, the points which I consider to be of importance, are, in the first place, to crush the stone as thoroughly as can be done, and then, when using the evacuator, to make the stream enter with great gentleness. I believe that cystitis may be aggravated or even caused by using too much force. As regards the rapidity of the operation of litholapaxy, I have no doubt that an operator will do it with greater rapidity as he does it oftener, but for my own part, I have found it a slow operation. I think that no surgeon should undertake it who is not prepared to give as many hours to it as may be necessary. I can recall three cases in the practice of other surgeons in which the patients died as the direct result of having a stone left half crushed in the bladder. Violent cystitis came on and the patient succumbed. Where the operation is undertaken, it should be completed. If the surgeon is not prepared to remove the entire stone at one sitting, he should not undertake the operation at all. This is the operation for small stones in patients with healthy bladders. Cystitis is the most dangerous condition in which to resort to litholapaxy. In the case of an adult presenting himself with stone, my first thought is of litholapaxy. I then consider the various circumstances in the case. Litholapaxy has so many advantages in cases to which it is adapted, that I think it should be the surgeon's first choice.

With regard to the objection that lateral lithotomy may render the patient sterile, I do not see why that should be, provided that the operation is confined to one side of the perineum, and that no undue amount of inflammation follows. If there were a great deal of inflammation, it is quite possible that there might be such obstruction of the vas deferens as to prevent the patient from generating with the testis of that side, but there is no more reason why the patient should be rendered sterile by the operation of lateral lithotomy than by the removal of one testicle. In the immense number of operations performed in former years, we never heard of this objection, and I believe that it is rather theoretical that practical.

I have had one case of stone weighing less than two grains, which I diagnosed by the sound, and removed by lateral lithotomy. The patient was a lad who had the symptoms of stone in the bladder, and in addition, frequent attacks of sudden and complete retention of urine, due to the calculus entering and plugging the internal meatus. The straining was so excessive that, in the effort to pass water the night before the operation, the patient ruptured sub-conjunctival vessels in both eyes.

I wish to refer to a few cases of cystotomy for other causes than calculus. I do not include cases where I have operated by Sir Henry Thompson's method of puncturing a contracted bladder above the pubis. I find that I have opened the bladder by cystotomy in eight cases, six of these being cases of cystitis. Of these six, four recovered and two died, as the result of the diseased state of the urinary organs. In two instances I have opened the bladder for intense pain in the act of micturition, due to a fissure at the neck of the organ. Both patients recovered. In one case the fissure followed cystitis, the result of gonorrhœa, and in the other case, the symptoms came on after the use of very large sounds.

I have had one case of cystotomy in a child for tuberculous disease of the bladder. This case was of a good deal of interest. The patient had, at one time, been under the care of the late Professor S. D. Gross, who had sounded the child, and said that he felt a stone. It is to be observed, however, that he never appointed a time to operate, so that it is possible that he may have had some doubts as to the diagnosis. A curious feature of the case was that the father, who was a man of considerable intelligence, declared that he had himself dis-

tinctly heard the click of the stone against the instrument. I sounded the child, but was not entirely satisfied that a calculus was present, although, from the history, I thought it probable. The child had all the usual symptoms of stone, except sudden arrest of the urine. I asked Dr. Forbes to see the case with me, and we thought it right to open the bladder. No stone was found, but there were discharged twenty or thirty little bodies which I presume were what the older surgeons would have spoken of as fibrinous calculi. They looked like little pieces of catgut. Whether these were masses of tuberculous material, or of inspissated mucus and lymph, I do not know. The patient was relieved of his symptoms, but died two months afterward of tuberculous disease of the mesenteric glands.

DISCUSSION.

Dr. John B. Deaver: I was glad to hear Dr. Ashurst refer to advanced Bright's disease and cystitis as contra-indications for litholapaxy. I have been struck with the fact that concussion of the bladder walls during the washing out of the fragments must be an exciting factor in producing an uræmic condition when there is disease of the kidneys. I recall one case operated on by one of the older surgeons, where uræmia occurred within twenty-four hours after the operation. I have known of one or two such instances. In other cases, apparenty similar in character, lithotomy had been performed, and no trouble has followed. There is no doubt there is some connection between the operation of litholapaxy and uræmia. In the cases where I have performed the operation, I have had a careful examination of the urine made to exclude cystitis and chronic affections of the kidneys before operating, in addition to making the other tests familiar to you all.

Dr. H. R. Wharton: In regard to litholapaxy in children, my experience is limited to one case, which was that of a child six years of age. The operation was quite tedious. I think that it took at least an hour to remove not a very large stone. The child stood the operation very well, and at the end of the fourth day the urine was perfectly clear and child was out of bed.

REPORT OF A CASE OF BEZOLD'S VARIETY OF MASTOID DISEASE.[1]

By WILLIAM J. TAYLOR, M. D.,

[Surgeon to St. Agnes Hospital; Assistant Surgeon to the Orthopædic Hospital and Infirmary for Nervous Diseases.]

THE following case was admitted into the surgical ward of St. Agnes Hospital on the evening of May 1, 1892.

Henry M., aged twenty-five years, and unmarried. Family history was very good. Some seven years before, he suffered from "a running" from the right ear which lasted for only two or three days. It received no treatment, but got well of itself, and from that time until the beginning of the present illness he has had no further trouble. About Christmas-time, a little over five months before his admission into the hospital, he had an attack of something resembling "la grippe," accompanied by sore-throat of a mild type; from this illness he also recovered rapidly.

The present illness began about the 30th of March, with pain in the right ear and headache. This pain persisted, and in about two weeks it centred in the ear.

He was then treated for over two weeks as an out-patient at the Medico-Chirurgical Hospital. He became much worse and was confined to his bed.

The day before his admission into the hospital he was seen by Dr. O'Hara, who, with the aid of Dr. Brinkmann, made an incision over the mastoid region. They could find no perforation or necrosis of the bone, and on account of the gravity of the case and because he could not receive proper care and nursing at home, he was sent immediately to St. Agnes Hospital. Upon admission his condition was one of pronounced septic poisoning, and when I saw him the next morning I feared the process had extended to the lateral sinus, and possibly to the cerebral tissues. His mental condition was dull and his vitality much depressed. The temperature was 100° F., and the pulse weak and very rapid. There was paralysis of the right facial nerve, but no evidences of cerebral motor disturbance. As it was plainly to be seen that delay would be dangerous, he was placed under the in-

[1] Read before the Philadelphia County Medical Society, May 10, 1893.

fluence of ether at once. There was much swelling and œdema over the right mastoid region, which extended downward into the neck, quite to the upper border of the clavicle. The skin of the neck was much reddened and congested. Pus was seen coming from the incision which Dr. Brinkmann had made behind the ear, and from the external auditory meatus. This incision was enlarged and the bone exposed and found to be hard and white, but pus was seen coming from below and from the direction of the auditory canal. The incision was extended downward into the neck, across the tip of the mastoid process, and over the sterno-mastoid muscle. This liberated a large quantity of pus. The tip of the mastoid process was now found to be necrosed, and the whole medial surface of the process was softened and broken down. A probe, and afterward a curette and the finger, could be passed from the inner or medial side into the centre of the mastoid antrum.

The posterior wall of the auditory canal was now chiselled through and the middle-ear cavity curetted with care but great thoroughness, and a large amount of cheesy pus removed.

The pus had burrowed into the digastric fossa and then down the neck beneath the sterno-mastoid muscle and along the tract of the great vessels.

All of the mastoid process which showed evidence of necrosis was carefully removed by means of the chisel and curette, and the whole wound thoroughly disinfected. The deep wound in the neck was drained by means of large rubber tubing, and was packed with iodoform gauze. As I did not have at hand rubber tubing of proper size, I passed a bundle of horsehair down through the external auditory meatus into the middle ear and out through the wound in the mastoid process, thus insuring free exit for all pus. The remainder of the wound and auditory meatus was packed lightly with iodoform gauze.

An ample dressing of bichloride gauze was now applied, covering the whole side of the head and neck, and the patient placed in bed. I feared, as previously stated, that cerebral abscess or other extension of the septic process had already occurred, but my dissection had been so extensive and the operation so prolonged that I thought it best to wait and see if further operative measures would be necessary.

His general condition by this time was grave and the shock was most profound.

The improvement in his symptoms manifested itself almost immediately. Reaction from the effects of the operation was somewhat slow but sure. His progress toward recovery was from this time rapid and without special interest. Within a few days the drainage-tubes and horse hair were removed, and the wounds, which had not been closed by sutures, were packed gently with iodoform gauze to insure free drainage, and a generous bichloride gauze dressing was applied over the whole side of the head.

On the seventh day his temperature had reached the normal, the highest point being 100¾°, and this on the day following the operation, and remained so from that time out. For a long time, however, his heart was extremely weak. No valvular lesion could be detected, but the pulse was very weak and very rapid. There was also a difference in volume between the two radial pulse-beats.

Under the free administration of tonics, stimulants, and good food, he rapidly improved in health and strength, and was discharged from the hospital, July 14th, well.

The facial paralysis persisted, however. This gradually improved, but up to the date of his discharge from the hospital his inability to close the upper eyelid was very apparent. The uvula was paralyzed on the right side, and the sense of taste diminished on the right side of the tongue as well.

His general health was very fair, though he still showed in his appearance signs of the severe illness through which he had passed.

On October 5th he was examined by Dr. Isaac Barton, who sent me the following report:

"I find evidence of a ruptured membrane, possibly for the escape of pus from his right side. The membrane now has partially re-formed, and his hearing with the watch on the right side is four

inches, on the left side normal. The 'A' tuning-fork is heard at five inches on the right side, while on the left it is normal.

"Bone conduction on the right side is very poor with the 'A' and 'C' tuning-fork, being the result of the operation and previous condition of the mastoid cells (of the right side). Nasal passage, anterior and posterior, somewhat congested but free for breathing space. Eustachian orifice of left side normal, that of the right side much thickened but not occluded."

In December, Dr. O'Hara called me to see him in consultation, as symptoms of typhoid fever were present. By this time the facial paralysis was entirely relieved, but he passed through a typical attack of typhoid fever. He had several hemorrhages from the bowels, and in the course of a few weeks periostitis of both shin bones developed. Suppuration occurred. Dr. David Bevan very kindly made a bacteriological examination of some of the pus and reports staphylococcus pyogenes albus.

A CASE OF DIPHTHERITIC CROUP IN WHICH A TRACHEOTOMY-TUBE WAS WORN FOR SIXTY DAYS.[1]

By H. R. WHARTON, M. D.

ON December 20, 1892, I saw a child eighteen months of age, who was suffering from diphtheria, who exhibited marked symptoms of dyspnœa. I introduced an intubation tube which relieved the dyspnœa, but at the end of fifteen hours this was coughed up, and I was summoned to see the case again, and found that the dyspnœa had returned. I then performed tracheotomy, and after the operation the dyspnœa was entirely relieved, and the patient subsequently did well.

On the tenth day after the operation the tracheotomy-tube was removed and the patient breathed comfortably, but in fifteen or twenty minutes after the removal of the tube the dyspnœa rapidly recurred and became so urgent that I had to replace the tracheotomy-tube.

Attempts were again made to remove the tube at intervals of a day or two for a week or more with a similar result. Four weeks after the operation the child was etherized and the tracheotomy wound was dilated, so as to expose the wound in the trachea. It was then found that there were a number of masses of granulation tissue springing from the trachea in the region of the tracheal incision; these were removed with forceps and scissors, and the tracheotomy-tube was again introduced. After waiting a few days another attempt was made to remove the tracheotomy-tube, but this also failed. An intubation-tube was introduced upon the removal of the tracheotomy-tube, and was worn for some hours, and upon its removal the child was able to breath comfortably for five hours; but after this time dyspnœa recurred, and the tracheotomy-tube was again introduced. After several trials of the intubation tube, it was finally abandoned, and it was decided again to etherize the patient and examine the tracheal wound, fearing the granulations had recurred. The patient was etherized and the tracheotomy wound was enlarged so as to expose the tracheal wound, and it was found that a number of masses of granulation tissue were present; these were removed with forceps and scissors, and their bases were touched with the solid stick of nitrate of silver. An intubation-tube was then introduced, and it was worn for twelve hours, when it was coughed up. Thinking its expulsion was probably due to the irritable condition of the larynx and trachea, resulting from the recent operation, I waited forty-eight hours and then replaced the intubation-tube. To keep the tracheotomy wound open, so that the tracheotomy-tube could be introduced, if it were required, I introduced an obturator into the tracheotomy wound. The intubation-tube was worn for four days and was then removed, and the obturator was retained in the tracheotomy wound for three days longer, and was then removed. The child after this time had no further difficulty with his breathing, and the tracheotomy wound, after the removal of the obturator, rapidly contracted and healed. The patient wore the tracheotomy-tube for a period of sixty days.

[1] Read before the Philadelphia Academy of Surgery.

A case of intubation of the larynx, in which the tube was worn for fifteen days.—On February 24, 1893, I saw, with Dr. H M. Fisher, an Italian child less than two years of age, who was suffering from marked dyspnœa, which had come on gradually in the previous forty-eight hours. I introduced an intubation-tube in this case, which completely relieved the dyspnœa, but is was coughed up in twenty-four hours, and the next larger tube was introduced. On the third day, the tube was removed and the child breathed comfortably for half an hour, but after this time the dyspnœa gradually returned and the tube had to be reinserted. Another attempt was made on the sixth day, and the tube was kept out for three hours, and after this time the dyspnœa recurred and I was compelled to reintroduce the tube. Attempts to remove the tube were made at intervals of two days, with a like result, and it was only on the fifteenth day that the tube was permanently removed.

In this case I noticed in each removal of the tube that there was little expectoration of mucus or membrane and that the cough was croupy and it was observed that at the time of the final removal of the tube that the cough was loose.

In all acute cases the patient is usually able to dispense with the intubation-tube in from five to eight days; this case wore the tube for fifteen days, the longest period in my experience that an intubation-tube has been required.

Two cases of excision of the hip-joint for Coxalgia.—I. Harry O'Neill, aged seven years, was admitted to the Children's Hospital April 27, 1892, having suffered from coxalgia for two years, and been under treatment in three different hospitals before he was sent to the Children's Hospital. When he came under my care there was a sinus on the outer aspect of the thigh, which discharged profusely, and he had the scar of an incision which had been made for drainage, upon the anterior surface of the thigh over the hip-joint.

On July 5, 1893, as the patient had suffered some time with a high temperature, and as he was rapidly losing ground, I decided to excise the hip-joint, and upon exposing the joint I found the head of the femur separated and represented by a small irregular sequestrum, and the neck of the femur had undergone marked absorption, the acetabulum was roughened, but not perforated. The patient did well after the operation; the wound healed promptly and he was sent to the country branch in two or three weeks after the operation.

I show the patient, ten months after the excision of hip-joint, and you see he has a very firmly healed wound and a very good range of motion at the false joint; his general condition is also excellent.

II.—Charles G., aged eleven years, suffered from coxalgia when eight years of age; was treated at the Children's Hospital as an out-and-in-patient for several years, and finally his condition became so bad by reason of the free discharge from sinus in connection with the hip-joint, and from his continued high temperature, that excision of the hip-joint was decided upon. The joint was excised in June, 1891, and the patient had a slow convalescence, but finally the wound healed, and the patient's general condition improved.

I show him to-night, nearly two years after the operation, and you see that he has a remarkably free range of motion at the false joint, and his general condition is excellent.

Specimen of fracture of the right femur showing the condition of the bone eighteen days after the injury, from an infant eight months old.—Emily S., eight months old, was admitted to the Children's Hospital, June 18, 1892, having sustained an injury of the right femur from a fall ten days before admission. Examination showed that there was a fracture of the shaft of the right femur. The child was suffering from enterocolitis at the time of admission, and was quite sick; the fracture was dressed with a moulded binder's board splint. The patient grew gradually worse, and six days after admission developed a temperature of 107° and died. Examinations of the specimen shows marked overlapping of the fragments at the seat of fracture, the shortening being at least one inch.

This specimen is of interest, as it shows that contrary to the generally accepted teaching that there is little shortening in fractures of the femur in infants, that marked overlapping of the fragments may occur, giving rise to very considerable shortening.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
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THE PENNSYLVANIA QUARANTINE LAW.

THE Bliss quarantine law has received the approval of the Governor. As finally passed, it embraces the following features:

First. In view of the prospective establishment at an early date of a thoroughly equipped and effective Federal marine quarantine on the Delaware bay or river, the Governor of the State of Pennsylvania is empowered, when satisfied that the United States has established and is maintaining on the Delaware bay, etc., an effective and sufficient quarantine to secure this Commonwealth against the introduction of pestilential, contagious and infectious diseases, the Governor is empowered to suspend by public proclamation the operation of State quarantine in part or in whole, at his discretion.

Second. The Governor is empowered under certain circumstances to lease the Lazaretto Station, which station, however, must be discontinued for quarantine purposes after July 1st, 1895.

Third. The Governor is authorized to acquire, by purchase, etc., a suitable place on the Delaware river or bay either within or without the limits of Pennsylvania, for the establishment of a permanent quarantine station.

Fourth. The State Quarantine Board is to be constituted as follows:

1. The Secretary of the State Board of Health.

2. The President of the Philadelphia Maritime Exchange, or a member of said Exchange to be designated by him.

3. The President of the College of Physicians of Philadelphia, or a member of said college to be designated by the President.

4. The Quarantine Physician provided for in this act.

5. The Health Officer appointed in pursuance of the act to which this is a supplement.

6. The sixth member to be appointed by the Governor of Pennsylvania.

7. The seventh member to be appointed by the Mayor of Philadelphia.

The members of said Board serving for various terms, so that all shall not go out at one time.

Fifth. The State Quarantine Board thus constituted shall make rules and regulations not inconsistent with the laws of the United States and this Commonwealth for the regulation and management of the Quarantine Station, etc.

Sixth. The Quarantine Board shall establish an office in the city of Philadelphia.

Seventh. The Quarantine Physician shall be the Executive Officer of the Quarantine Station.

Eighth. The time the act is to go into effect is July 1st, 1893, from and after which date the offices of the Lazaretto Physician and Quarantine Master shall cease to exist.

Ninth. Section 13 provides that the power of the Philadelphia Board of Health over maritime quarantine ceases when this act goes into effect.

An appropriation of thirty-five thousand dollars ($35,000) towards the cost of securing a site and equipping same, in conformity with the requirements of this act, was passed during the last days of the legislative session.

The value of the measure will depend altogether on the personnel of the Board. Dr. Lee has done such good work as a sanitarian that his efficiency may be safely assumed. The participation of

the Maritime Exchange is a wise measure, as providing that the important commercial interests of the port will not be sacrificed without reason. The College of Physicians comes in next, in pursuance of a suggestion made years ago by this journal, that that learned body should get down from its scientific stilts and interest itself a little in the needs of its fellow-citizens, following the example of the French Academy. The city is amply represented, in its very efficient Quarantine Physician and Health Officer, and in one member to be appointed by the Mayor. Whoever his choice may fall upon, he cannot do very serious mischief in a Board thus constituted. With men of practical training in sanitary science in the majority, the Quarantine Board should become an efficient coadjutor to the City Board of Health, and the public may rest assured that their interests will be secured. Not the least of the benefits of this Act is that it legislates the Lazaretto physician out of office. Altogether the Legislature is to be congratulated on a wisely executed piece of legislation.

Bureau of Information.

Questions on all subjects relating to medicine will be received, assigned to the member of our staff best capable of advising in each case, and answered by mail.

When desired, the letters will be printed in the next issue of the Journal, and advice from our readers requested. The privileges of this Bureau are necessarily limited to our subscribers. Address all queries to

Bureau of Information,
TIMES AND REGISTER,
1725 ARCH STREET, - Philadelphia, Pa.

STRYCHNINE FOR THE AGED.

PROF. WAUGH cautions us against giving strychnine to old people with hypertrophy of the heart. I would like to ask the Professor why? I do not remember seeing it interdicted; and in conversation with some old physicians, they could not see why it should not be used. Let the Professor give us a short article on it. D. F. HUDSON, M. D.

RUSSELL, KY.

[Strychnine is not indicated in hypertrophy of the heart, and is capable of doing great mischief, by increasing the force of the heart in pumping blood into vessels which, in such cases, are very likely to be atheromatous, and thus causing apoplexy.—W. F. W.]

POLYURIA.

ALLOW me to call on your valuable paper for a little help. It would be impossible for me to get along without the TIMES AND REGISTER. Mr. B., aged 60 years, general health good, has been passing a large quantity of urine for the past six months; but there is no albumen or sugar in the same. It has a a specific gravity of 1012. He has no pain in his back, and is not thirsty. I am not able to discover anything wrong in his system to account for the trouble. Please give me your view of the case from this brief description; also the treatment. J. D. BENNETT.

PIKES PEAK, MICH.

[If there is no sugar, it is diabetes insipidus, or polyuria. The remedies are: a full dose of pilocarpine, followed by ergot, unless the pulse shows undue tension; when nitro-glycerine is the remedy. Limit the quantity of liquids taken, and keep the skin active by baths, followed by rubbing with coarse towels.—W. F. W.]

GREEN DIARRHEA.

I HAVE a patient, a babe nine weeks old, who has been suffering for a period of four weeks with green stools, but no diarrhœa. Also there has been a great deal of cough. I notice that when the stools assume a semi-yellow color, the child is much brighter. This morning in making my call, I found an entirely green stool and the child restless and feverish. There is some vomiting, with an anemic condition of the mouth.

There is a disposition on the part of the child to throw its head back, as in brain trouble, whenever the stools are green.

There is considerable gas formation in the bowels. I am giving bromides to secure rest and bicarbonate of soda with pepsin for the stomach. The child never

suffers from fever unless its stools are quite green

I should be glad to have you advise me what to do to correct the stools. Unless I can accomplish this I fear I will lose the little patient. He nurses the mother's breast strongly every two or three hours. To what is the green stool due? The milk is well digested in the stools, and there is no fetor about them.

C. W. HUGHES, M. D.

BIG RUN, PA.

[The green stools are generally thought to be due to the decomposition of bile; though Hayem asserted that a specific microbe was concerned in their production. He advised the use of lactic acid, ♏ j, every two to four hours. I have obtained the best results from the use of zinc sulphocarbolate, gr. ¼, bismuth subnitrate, gr. j, and saccharated pepsin, gr. j, every hour or two.

—W. F. W.]

AURAL SYPHILIS.

THE case reported in Vol. XXVI, No. 21, of the TIMES AND REGISTER, for which an anonymous colleague asks an advice, concerns a patient with a buzzing noise in the left ear, lasting four years, itching of the meatus, and the feeling of shaking water in the ear, together with the history of syphilis of his wife and baby. Although the probability of syphilis is emphasized in the answer, if a foreign body can be excluded, I would agree with the diagnosis, if the following questions could be answered:

1. What is the condition of the membrana tympani, when examined by the otoscope?

2. What is the result of the examination of hearing for the watch and voice?

3. What is the result of examination with tuning forks?

4. Is the tinnitus continuous, day and night, and very distressing in character, or is it intermittent?

5. Is there any complaint of vertigo?

Since aural patients suffering from syphilitic disease are attacked *with predilection* in the labyrinth, and the symptoms mentioned in your case do not point to that organ, it would seem somewhat rash to make the diagnosis of aural syphilis without answering the questions as given above.

MAX TOEPLITZ, M. D.

Assistant Surgeon to the N. Y. Ophthalmic and Aural Institute.

MORPHINISM.—STRYCHNINE.

SOMETIME ago I wrote to you about a couple of patients I had who were in the habit of taking morphine. Well, I have got rid of them; I candidly told them they would have to go to some retreat, as I was powerless to do any thing for them. I am glad for my peace of mind that I have no more such cases, nor do I want them. They are a little out of my line. I certainly sympathize with any physician who has to treat these cases, he must have a World's Fair of patience, forbearance, etc., too numerous for one mortal to mention.

I saw a remark of yours some time ago that strychnine was a great tonic. I want to know how far, generally speaking, one dare go with this remedy. Would you combine it with phosphoric acid and add syrup, instead of giving it in drop doses (that is, when you give it for the patient to take himself)? I feel confident from your experience you can aid me. I have some patients who want to have something to make them feel better, and I have thought that strychnine would be indicated.

[You have reached the conclusion to which the physician is sure to come, who tries to treat morphinism at the patient's home.

As to strychnine, in ordinary cases the fortieth of a grain, three times daily, is a good average dose. Aged people bear much larger doses; and, in fact, it may be increased to gr. $\frac{1}{20}$ or even $\frac{1}{10}$, if the tension of the pulse be noted But this tension would be dangerous in hypertrophy of the heart, or in atheromatous disease of the arteries, and caution should be exercised in such cases. This is the more needful, as strychnine in heroic doses has been highly recommended as a tonic for aged persons, without noting these exceptions.—W. F. W.]

VARICOCELE. — ANGINA PECTORIS.

I DESIRE the best treatment for varicocele. I have ligated the veins in several cases by passing a ligature around them and tying it tightly, but afterwards there would be left one or two veins, principally in the bottom of the scrotum, that would enlarge when the patient stood on his feet.

I would also like to know if there is any new remedy that has any effect on angina pectoris. I have a case, caused by fatty heart with degeneration of the blood vessels of the head. I have used all the remedies advised in text books,

without giving any but very temporary relief. An answer by a member of your staff would be gratefully received.

R. A. REGER, M. D.

BUCKHANNON, W. VA.

[If ligation fails, the enlarged veins can be excised. But as some veins must still be left to return the blood, these will enlarge, unless the causes of varicocele are remedied. Treat the constipation, order cold douches, and a suspensory bandage. See Dr. Lydston's excellent little book on varicocele.

The directions for the treatment of feeble heart have been given in another letter in this issue. For angina pectoris, the pain may be most promptly relieved by nitrite of amyl, or nitroglycerine. Apply a quickly-acting rubefacient over the right pneumogastric nerve in the neck. For the arterial disease, give iodoform, gr. j, thrice daily.—W. F. W.]

HEART DISEASE.

I HAVE a patient with disease of the heart and lungs; spitting blood, though not much at a time; has some pain around the heart. He is able to do but little work. The pulse stands at about one hundred. He eats well, but the pain causes vomiting, and when this comes on he has to stop work. I do not find much the matter with the heart, except that it is quite weak, so that at times it is hardly perceptible at the wrist, although regular in rhythm. The respirations are normal. He is unable to run or to walk fast, as this excites the heart very much. There is not much digestive trouble. He has had many advisers, but obtained very little benefit.

A long life to you and to the TIMES AND REGISTER.

Z. R. MILLARD, M. D.

THACKERY, ILL.

[The symptoms point to heart disease, with failure of circulation, from valvular disease, followed by dilatation and fatty degeneration. The end is death, preceded by dropsy. Give tincture of digitalis, gtt. xx, every four hours for a week; then follow with spartein sulphate, gr. $\frac{1}{2}$, quinine sulphate, gr. ij, and iron sulphate, gr. j, in pill four times daily. Put the patient on a rich, highly nutritious, but dry diet, using as little liquid as possible. Increase the heart's strength and diminish its work by enriching the blood and reducing its watery elements.—W. F. W.]

ECZEMA.

I HAVE a young friend, clerk in a drug store, who has for two years suffered from eczema of the face and scrotum. He has taken Fowler's solution for eighteen months, and nearly everything else, but gets no better, except that the discharge has ceased. Could you suggest a remedy? He seems to be quite healthy, is stout, and a hearty eater, but is careful as to his diet.

Since your sulphocarbolate of zinc has come in vogue, typhoid fever is as easily treated successfully as a bad cold.

W. S. CLINE, M. D.

WOODSTOCK, VA.

[Keep the bowels and urinary apparatus in order; forbid malt liquors, tomatoes, coffee and condiments. Apply to the eczematous surfaces an ointment of biniodide of mercury, ten to twenty grs. to the ounce for the face, but weaker to the scrotum. Internally give lobelia in doses just less than what will produce nausea.—W. F. W.]

ARSENITE OF COPPER.

IT is just about the time that the "arsenite of copper" is in order, and I would like to know, in your next issue, *how* and *when* to use the same for adults as well as children.

Of course, I know something about it, but would like to hear from some one who has tested it thoroughly.

My first inquiry to your paper was answered so promptly and satisfactorily, that I appreciate your Bureau of Information; hence my second request for help.

R. R. C.

[Dr. Aulde is the authority on arsenite of copper. I have not obtained any benefit from it in summer complaint, or in cholera infantum. In the irritative diarrhea of adults, when the taking of food excites the bowels to action, it has proved useful, in doses of gr. $\frac{1}{13}$ every two to four hours. Also, when diarrhea or dysentery tend to become chronic, it has been of benefit in the same doses. Excepting in these cases, I have not found the arsenite of copper as useful as other remedies. It must be borne in mind that for the same class of affections for which Aulde recommends this drug, I introduced the sulphocarbolates, and my verdict may be influenced by the natural partiality of a father for his own children, or by the fact that I have acquired the skill that comes from much experience in the use of my favorite drug. Still, I try to be as impartial as possible, and the above is my sincere belief.—W. F. W.]

FACIAL NEURALGIA.

I HAVE a delicate female patient who suffers with facial neuralgia. Can you tell me the best remedy?

[Try the modified anti-nervine formula, equal parts of acetanilide, soda salicylate and ammonia bromide, five grains of each, every two hours. Many of these cases are beyond drugs, and require surgical aid.—W. F. W.]

EXPERT TESTIMONY.

I AM called upon to give expert testimony in the following case: Miss C. testifies that while she was engaged as a domestic at the house of Mr. H., (a widower), she was seduced, and became enceinte by him.

Mr. H. says it is a scheme to draw money from him, declaring that he "never touched her;" and that he can prove by his physician, etc., that he was suffering from gonorrhea during all the time that she was at his house. Now the question is, could she become pregnant from intercourse with him, he having the clap, and not take the disease? I would be thankful for advice upon this. H.

[As we understand the case, the woman claimed to be a virgin, inexperienced in such matters. For such a one, escape from contracting gonorrhea would be practically impossible under the circumstances (she being destitute of the immunity possessed by old hands), unless she employed preventatives. These would equally prevent pregnancy. She could not become pregnant from him without becoming also affected with gonorrhea; and the gonococcus is so inimical to the spermatozoon that it is exceedingly unlikely that she could become pregnant at all under these circumstances without at the same time contracting gonorrhea. So true is this, that in seeking for the causes of sterility, we always look for the possibility of gonorrhea being present. But Mr. H. has placed himself in a very dubious position by his defence; for he has acknowledged that no principle restrained him, since he had contracted gonorrhea, presumably by immoral sexual congress; while if Miss C. claims to have also contracted gonorrhea, and can prove it, he is dished.—W. F. W.]

"CONTINUED REMITTENT FEVER."

I WRITE to ask concerning a febrile affection prevalent here, which, for want of a better name, I have called the "continued remittent." Is there any treatment that will cut it short? Quinine fails, as does everything else, ordinarily.

In pelvic or general peritonitis, what is the best local application, heat or cold?

Which is best for meningitis? Can you refer me to any literature on the use of cold and heat in the treatment of disease?

M. M. GILBERT, M. D.

MESA, ARIZONA.

[1. Try sulphocarbolate of zinc, gr. ij, every two hours, with bismuth subnitrate, gr. v. 2. I would use whichever is most agreeable to the patient. 3. Cold, by all means. 4. Write to Dr. S. Baruch, New York City, for his work on the uses of water. —W. F. W.]

Book Notes.

APPENDICITIS AND PERITYPHLITIS. By Charles Talamon, M.D. sq. 12mo. pp 210. Geo. S. Davis, Detroit, Mich., 1893.

The author gives a very complete description of this malady, in a style which must make it valuable to the general practitioner; and his directions for medical treatment of cases suitable for this method of management are succinct and admirable. The surgical means indicated are such as have been so much talked about within the past three months by those who aim toward specialism in this line.

THE SURGERY AND SURGICAL ANATOMY OF THE EAR. By Albert H. Tuttle, M.D., sq. 12mo, pp 109. Geo. S. Davis, Detroit, Mich., 1892.

This treatise is extremely well written, and will be a good guide to all who own it, in the very troublesome disorders treated in the little work. Ear diseases are the bane of all who unfortunately have to care for them, the specialist apparently being no more successful with them than the common doctor. A number of new hints of value are given in the book, and the physician cannot err in having a copy of it in his library. The illustrations are fine.

SEXUAL WEAKNESS AND IMPOTENCE. By Edward Martin, M.D., sq. 12mo, pp 102. Geo. S. Davis, Detroit, Mich., 1893.

The volume is simply a re-written one, embodying about the same ideas as its predecessors; and we cannot agree with the author in much of his treatment. Ninety per cent of all cases of sexual weakness are the result of excesses in young and old; and stimulating remedies such as damiana, phosphorus, strychnia *et al* do naught but whip the worn out steed. Rest, bromides, camphor, with now and then in selected cases electricity, are the main agents for cure where such is possible, but the truth is that most subjects simply drift from doctor to doctor without any real gain in the end.

HANDBUCH DER OHRENHEILKUNDE. Prof. Dr. Hermann Schwartze. Zweiter Band. Mit 177 Abbildungen in Text. Leipzig. Verlag von F. C. W. Vogel, 1893. Preis 30 Mk.

This fine work ought to be translated into English, and would be, were the affections of the ear receiving their due share of attention.

THE RELIGION OF SCIENCE LIBRARY.—In order to place our publications within reach of persons of limited means and to obtain thereby a wider circulation for the same, it is proposed to issue, commencing in June, the following list of works in paper covers under the general heading, "The Religion of Science Library." The books will be issued bimonthly as second class matter, and will be printed from large type on good paper, and well bound.

The subscription price will be $1.50 a year, postpaid in the United States, Canada and Mexico; 75 cents for six months, and 25 cents for single numbers.

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The Principles of the Religion of Science. By Paul Carus, Ph. D.

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On Double Consciousness. By Alfred Binet.

The Soul of Man. By Paul Carus, Ph. D.

The Diseases of Personality. By Th. Ribot.

The Ethical Problem. By Paul Carus, Ph. D.

Epitomes of Three Sciences. Prof. H. Oldenberg, Prof. Joseph Jastrow, and Prof. C. M. Cornill.

Homilies of Science. By Paul Carus, Ph. D.

The Open Court Publishing Co., 770 "The Monon," 324 Deaborn St., Chicago.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Vol. V. 1893.

The volume contains thirty-eight papers, and the discussions thereon, by the members of this Society, among whom are to be found some of the brightest men in the profession.

The Medical Digest.

SPRAINED ANKLE.—Almost every one has had more or less experience in the twist of the ankle which strains the tendons and sometimes lacerate the capsular ligament. These sprains are often more tedious than an actual fracture, and under the old treatment required a longer time to remedy. Some years ago Mr. Edward Cotterell, of the University College Hospital, London, published a little work giving the outline of a new method of treatment which he had found highly successful. Recently Dr. V. P. Gibney, of the New York Polyclinic, has put the method in practice in his hospital and private practice with such marked success that his experience, published in the journal of that institution, has been adopted by many others. The foot, the ankle and the lower third of the leg are strapped with an adhesive rubber plaster, the foot being well raised, about half an inch in width. The first strap was carried over the outer side of the foot from near the base of the little toe, each successive strip overlapping the other until the lower third of the limb was included. Over all was placed a cheese cloth bandage. The patient was then told to put on stockings and shoes and walk, and was directed to walk every day. The recovery in each case was without relapse, speedy and complete.—*N. Y. Med. Times.*

EUROPHEN IN VENEREAL LESIONS.—In a late report in the *Therapeutische Monatshefte*, Dr. Carl Kopp, of Munich, gives the results of treatment by europhen in thirty-five cases of chancroid, inguinal bubo and the moist papules commonly observed in the genito-crural and anal regions of syphilitic subjects. In the treatment of chancroid, the ulcers and surrounding parts were first thoroughly cleansed with a 1 to 1000 corrosive sublimate solution, and the parts dried with cotton. Europhen in powder was then applied two or three times daily, the lesions being cleansed each time with the sublimate solution. In some cases the europhen powder was mixed with borac acid in various proportions ranging from equal parts of each

substance to one part of europhen and and five parts of boric acid. No symptoms of irritation were observed even where the pure europhen was employed. The time of healing corresponded to that required by iodoform under like conditions. In a few of the cases curetting was resorted to, the sores being then dressed with dry europhen after a careful application of bichloride gauze until a cessation of the hemorrage. After the formation of the crusts, europhen and boric acid in equal parts was dusted over the wounds. In cases of sympathetic inflammation of the inguinal glands with supperation, the abscesses were opened, scraped, and the parts disinfected with the sublimate solution and the cavities packed with tampons rolled in europhen-boric acid in powder of the strength of one to the former to five of the latter. The secretion remained odorless, the surrounding parts showed no sign of irritation, and fistulate was not determined in a single case. In the treatment of moist papules the object was to convert the hypertrophied and profusely secreting condylomata into the dry form and to cause cicatrization by dusting on europhen-boric powder 1 to 5. The adjacent surfaces were kept apart by the use of cotton.

Dosimetry.—I desire to make mention of a few remedies which I have found to be very useful in certain disorders: In cholera morbus and cholera infantum, and in all diarrhœal disturbances produced by fermentation, sulpho-carbolate of zinc is the remedy above all others of its class. When pain accompanies the above named diseases, codeine or hyoscyamine will relieve the colic. Sulpho-carbolate of zinc and codeine in ⅓ grain doses, given every half hour, will soon give relief, or hyoscyamine 1-250 of a grain, every half hour, will be equally effective and without bad after effects. Uterine colic from suppression of menses yielded after the second dose of hyoscyamine 1-250 and macrotin 1-6 grain, given a half hour apart. Lumbago yielded rapidly to veratrine 1-134 grain, colchicine 1-134 and macrotin 1-6 grain, given together every hour. Several cases of pertussis improved rapidly under calcium sulphide and monobromide of camphor, 1-6 of a grain each, given every two hours. Acute cystitis improved rapidly under hyoscyamine 1-250 grain, aconitine 1-134 grain and lithum benzoate ⅓ grain, given every hour. Hyoscyamine has largely replaced the opiates in my practice. In all cases of spasmodic action of the hollow viscera, hyoscyamine and strychnine will produce relief very rapidly, without any evil after effects, and, usually, before the pupil is dilated.—Schaller, *Lancet-Clinic.*

Soothing Syrup without Opium.—

℞ Oil anise . . . . . ♏xxv
Alcohol . . . . . ℥ij
Fl. ext. valerian . . . . . ℥i
Oil peppermint . . . . . ♏xv
Tinc. camphor . . . . . ℥ij
Fl. ext. liquorice . . . . . ℥i

M. Sig. Shake the bottle. Dose—One-fourth or one-half teaspoonful in water; repeat as needed.
—*Lancet-Clinic.*

The Justifiable Prevention of Conception.—The physician not infrequently has to warn against conception in cases where a pregnancy would endanger the life or the health of the patient. Pelvic contraction, abdominal and uterine tumors, etc., form such an indication. The advice to abstain from coitus is but seldom followed, and the means usually employed to prevent gestation (mechanical) are objectionable from a hygienic and ethical point of view. Kleinwächter has endeavored to find a remedy which would have none of the aforementioned drawbacks. He prescribes a cacao-butter suppository containing 10 per cent. of boracic acid to be introduced high up into the vagina. These suppositories dissolve in about one hour, and the liberated acid destroys the spermatozoa. Bichloride of mercury in 0.001-gramme doses can also be used, but in that case a vaginal douche has to follow the sexual act. The solvency of the suppository is heightened by adding one grain of oleum olivæ. The author considers this a safe and sure remedy to prevent conception. Therapeutic effects may be combined by the adding of various drugs—for instance, tannin in cases of uterine catarrh.—*Med. Age.*

PRENTISS (*Atlanta M. and S. Jour.*) gave pilocarpine, for ten days, in full doses to a woman affected with pyelonephritis and anuria. Full physiological effects were produced, and recovery followed. Her hair, fine and yellow naturally, became coarse and dark brown during the treatment. In another case, the hair darkened, but faded a few days later. In a man 72 years old, with contracted kidneys, the eye brows and hair grew darker.

A YOUNG woman requested an examination to ascertain if she were affected with gonorrhea. There was no vaginal discharge, and no other symptom indicating such affection. However, the test paper placed in contact with the vaginal wall gave an acid reaction, and the diagnosis was guarded. Two days later a vaginitis, inexplicable save on the blenorrhagic theory, manifested itself.

News and Miscellany.

The Pennsylvania State College, at Bellefonte, holds its commencement exercises June 11 to 14.

Dr. Goodell has resigned the chair of gynecology, at the University of Pennsylvania, and Dr. Charles B. Penrose has been elected as his successor.

The Sanitarium for Sick Children, at Red Bank, was opened for the season, June 1. A large number of the friends of this most deserving charity were present.

Dr. L. Riesmeyer is the new editor of the *Weekly Medical Review*, of St. Louis. He has restored the department of Original Articles, but otherwise conducts the journal on the lines laid down by Ohmann-Dumesnil.

Klein says that tuberculin produces no reaction in tubercular cases unless the streptococcus pyogenes or the diplococcus pneumoniæ be present. Tuberculin is no specific, but rather a stimulant of pus cell potential energy, even when no tuberculosis is present.

The 127th annual meeting of the Medical Society of New Jersey will be held at the West End Hotel, Asbury Park, June 27 and 28. Papers are announced by Drs. J. W. Stickler, G. T. Welch, W. B. Johnson, H. L. Coit, J. P. Wade, W. Elmer, Jr., S. E. Armstrong, and others.

A member of our staff writes to us that in the issue of June 3, there appeared an item attributing to a distinguished French clinician certain statements in regard to bromidia. This, he says, is erroneous, no such paragraph occurring in the journal quoted. The item was copied from some source, which we cannot now recover, and inserted without the usual verification. We would be sorry indeed to injure Dujardin-Beaumetz, whose writings appear in this journal more frequently than those of any other French writer, by misquoting him; and we are sure that the manufacturers of bromidia, whom we have always found to be upright and honorable in their dealings, would regret as deeply as we the occurrence of such a mistake.

The sixth annual conventiou of the National Railway Surgeons' Association was held at Omaha, May 31 to June 3. Addresses were delivered by the President, C. W. P. Brock, of Virginia; E. R. Lewis, John Van Dyne, Paul F. Eve, Thomas H. Manley, D. S. Fairchild, J. A. White, and C. M. Woodward. Dr. J. B. Murphy demonstrated on a dog the use of his button for intestinal anastomosis. Many of the members, with their families, availed themselves of the courtesy of the Uuion Pacific Railroad, and took a run out to Denver. Galveston, Texas, was selected as the next meeting place, and the following list of officers elected for the ensuing year:

President, Dr. W. J. Galbraith; First-Vice-President, Dr. E R. Lewis; Second Vice-President, Dr. Thomas H. Manley; Third Vice-President, Dr. E. F. Yansey; Fourth Vice-President, Dr. D. F. Stewart; Fifth Vice-President, Dr. E. A. McGannon; Sixth Vice-President, Dr. E. G. Cochran; Seventh Vice-President; Dr. W. R. Blakesley; Secretary, Dr. J.

M. Dinnen; Assistant Secretary, Dr. J. H. Ford; Treasurer, Dr. J. Harvey Reed.

Members of the Executive Committee, A. J. Mullen, Jr., to fill unexpired term of Dr. Dinnen; Dr. J. B Murphy, A. A. Thompson, C. K. Cole.

Chairman of Transportation Committee. Dr. W. B. Outten; Chairman Committee of Arrangements, Dr. C. H. Wilkinson.

Many friends of the TIMES AND REGISTER were present, besides those named; including Drs. Ritchey, of Oil City; Wilson, of St. Mary's; Starkey, of Chicago; Kibler, of Corry. etc. The Association numbers over 1500 members, of whom Pennsylvania furnishes the largest number of any one State. The proceedings are to be published in the *Railway Age.*

N. Y. STATE HEALTH BOARD REPORT.—The increase in the mortality, which began in March, and was then estimated at 2,000 above the normal for the month, has continued, with a slightly greater increase in April. The average daily mortality is 395, which is about sixty more than in January and February and eight more than in March; it is forty-two more than in April, 1892. The relative proportion of deaths from zymotic diseases is unusually low; the deaths from other causes (local diseases), while corresponding very closely with the mortality of March, being greatly in excess of that of the same period of last year. The increase of mortality for the month is not less than 2,000 above the normal and is to be traced to a continuance of the epidemic of grippe, which was estimated to have caused a mortality slightly less than this last month. The increased mortality has, as in March, been much the greatest in the Maritime District, where the death rate from diseases of the respiratory organs and of the nervous system has been unusually large. Of ordinary zymotic diseases, all show an actual as well as relative decrease, except *cerebro spinal fever*, the increased number of deaths from which occurred chiefly in the Maritime District. Of the twenty-three deaths from *small pox*, one occurred in Callicoon, Sullivan county; an outbreak is prevalent at College Point and cases have occurred at Jamaica and in the town of Southold. *Consumption* participates in the larger mortality from all diseases of the respiratory organs. Of the 11,865 deaths occurring during the month, 9,783 were reported from 149 cities, villages and larger towns, the aggregate death rate of which was 24.86 per 1,000 population.

FAKIRISM IN MEDICAL JOURNALISM.—A journal comes to our table with an editorial blast suggestive of Sinai. In trumpet tones, it announces that it is intended above everything, for the advancement of the broadest and highest principles of research and practice, in all the branches of medicine and surgery, and in all their allied sciences. It courts open, free and impartial discussion. Its aim is to furnish the profession, etc., etc. It does this work not for "filthy lucre," but for the love of it. It is engaged in the business of medical journalism for its health exclusively. Lastly, it excludes from its editorial, reading and advertising columns, everything which is not thoroughly scientific in its nature.

Did some one ask if this journal referred to, which carries upon its banner the word perfection, was a journal established by eminent men in the medical profession, so well endowed with this world's goods as to be entirely independent of income; by men whose every thought is in harmony with science, humanity, and up-building of the medical profession and the benefiting of every individual doctor in the world; by men not having to give a thought to the needful in a financial way, solely inspired by elemosynary desires; did this blast come from a medical journal established by such men? No. It came from a trade journal which sails under the name of medical journalism, and thus defrauds "Uncle Sam" of much money which properly belongs to him for postage. A trade journal published under the name of *Merck's Bulletin*, which is nothing more than a trade catalogue established for the purpose of presenting to the druggists and physicians of this country arguments in favor of drugs which are patented, and which happen to be completely controlled by the importing house of Merck & Company.—*Med. Mirror.*

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Original Articles.

REMARKS ON FIFTY MASTOID OPERATIONS DONE IN THE PAST FOUR YEARS.[1]

BY B. ALEXANDER RANDALL, M. D.

[Professor of Diseases of the Ear, Philadelphia Polyclinic; Clinical Professor of Otology in the University of Pennsylvania; etc.]

THE opening of the mastoid portion of the temporal bone for the evacuation of pus, after the unmerited eclipse into which it had been cast for nearly a century, has gained increasing use and advocacy during the last few decades. Begun as a desperate resort, and often withheld too long in cases demanding it, it has been practiced with increasing boldness by general and special surgeons with the result that timely and careful employment has greatly improved the record of its results; yet it has again been employed under doubtful indications, in a way that has raised anew questions as to its propriety. The great advance in intra-cranial surgery has shown that conditions once regarded as hopeless can be successfully combated by modern methods. The timid plan of cutting down upon the mastoid and resting satisfied with that, is growing less frequent, since the conservatives are forced to admit that they have then to wait for months or years for nature to loosen or throw off dead tissue, of which most, if not all, might be removed with safety in a few minutes, and wider clinical and anatomical study is showing the way more clearly to radical but truly conservative measures. Yet the aurist can never forget that the organ of one of the most important senses is committed to his care, nor be content if he has avoided the dangers to life at needless cost to the hearing. The relative safety of timely operation has been proven by the fact that death is growing steadily less frequent in operated cases, and falls far below the proportion of fatalities where operation is indicated yet refused. At the same time we are improving the definition of the larger group of cases where vigorous antiphlogistic treatment, by hot douching, dry heat, and rest in bed, will safely avoid the dangers of mastoid inflammation and obviate the resort to operative intervention. The wider spread of rational treatment of tympanic suppurations will doubtless do as much to lessen the frequency of serious intra-

[1] Read before the Philadelphia County Medical Society.

cranial extensions as the better and more hopeful diagnosis of their occurrence and accessibility during life will bring them into notice as demanding intervention and yielding to surgical skill.

The notable results obtained of late years by general surgeons has called more widespread attention to this field and awakened more general interest; but it should not be forgotten that it has been quite frequently the aurist who has diagnosticated the case, indicated the operation; and only sometimes called in the general surgeon to perform it. And while the aurist has rarely reported his results in these fields in general meetings and journals, it has not been because he has not obtained the same brilliant success, though oftener without than with perilous and somewhat questionable operation. It should be better known than it is that the suggestion to open and evacuate the thrombosed lateral sinus was put forth by Zaufal ten years before it occurred to Victor Horsley; and that it has been rarely done by aurists because by mere mastoid trephining they have obtained recovery in too many pyæmic cases, where the long-known purulent thrombosis in the mastoid emissary vein showed thrombosis of the lateral sinus. It has been suggested that the aurist ought to call in the general surgeon to do his mastoid operations; and surgeons in conclave, as in Berlin a few years ago, have found much fault with the lack of radicalism which we often show. But Küster, who was the most hostile critic, showed in the discussion that he had small and none too brilliant experience of mastoid trephining and had no adequate acquaintance with the methods or results of the aurists whom he criticised. The method of chiseling away the back wall of the auditory canal, which he advocated, had long been employed by aurists, like myself, in the appropriate cases; but will probably not often be practiced as the routine procedure by anyone having fair respect for the organ of hearing and a knowledge of the perfect results generally obtainable at less risk and cost. That v. Bergmann and others have had large and valuable experience in this line is undoubted; yet what general surgeon has done some three hundred of these operations, like J. Orne Green, of Boston, Schwartze, of Halle, and several other otologists? Having done less than a hundred operations myself, I can take but a low place in the list of aural operators; yet few, if any, of the general surgeons of this or other cities can cite a wider or better series of cases. Men are known sometimes by their failures, and perhaps some of you can tell of more unsuccess on my part than I am myself aware of; yet I, too, could point to many histories of cases that came to me from other men, or, leaving me, have died under the hands of others. And it is because it is very hard for the operator to gain such knowledge as to the ultimate results of his cases that I here present my experience for criticism and emendation. Doubtless the four years of epidemic influenza have greatly influenced the matter of mastoid inflammation and enforced more frequent resort to operative intervention, for the notices of such cases have redoubled during this period, and my operations, previously infrequent, rose to seven in 1889, ten in 1890, fifteen in 1891, and twenty in 1892. The increase of my ear patients from some 1200 at the earlier, to 1500 at the latter period, has combined with other influences to enlarge my experience in this direction; but other men have the same increase to report. Roosa, who has always advocated operation, had but thirty-four cases to report from his twenty years' work up to 1890, and has since then opened the mastoid more than a hundred times; and Schwartze, who took from 1864 to 1883 to obtain his first hundred operations, has been doing them in treble proportion since. Yet the finding of past years, that about four per cent. of my ear cases presented evidences of mastoid inflammation and about one-fourth of these demanded operation (50 cases among 5000), has not been verified this year; and whereas, the first half of 1892 gave me fourteen operations, but few mastoid cases and a single operation have been met this year. Most of these operations I have myself performed, but a few have been done by others—as some of the university cases by Dr. Brown, the Instructor in Otology, and the one of this year was kindly done by Dr. William J. Taylor during the incapacitation of my right hand.

As a result of the study of some two hundred cases where the suggestions of mastoid trouble, as furnished by pain, redness, œdema, apparent fluctuation, and deep-seated tenderness to pressure, have been decidedly disquieting, I believe that quite three-fourths of such cases can be brought safely through without resort to operation; and that unless the symptoms are urgent, or the fluctuation unmistakable, the surgeon can give a fair trial to vigorous use of heat by douche and hot-water bottles, with rest in bed and good hygiene. But a number of my patients were brought to me after all hope of resolution was gone; and when pus is present in or on the mastoid, I can imagine little cause for delay in evacuating it. The fatal results of the disease may not always be avoided; slow, tedious healing may be the best that can safely be secured, and facial palsy or impairment of hearing may prove irremediable, or may even occur after operation. Prognosis must be cautious, and one should never promise his patient anything more than that he will give him his best judgment and skill; yet, none the less, in careful hands the opening of the mastoid will continue to give, as it has done in thousands of cases in the past, the fullest justification for its performance. The fifty cases which I here report include but two of known fatal issue, although others ultimately died of tubercular meningitis or related troubles, as my specimens will show. Only one case (which has been reported in full elsewhere) gave room for ascribing the death to the operation, and it is the only case in which it might be said that no pus was found in the carious antrum. Generally a bone sinus was already present, sometimes already communicating with the exterior, and the operation was the rather trivial one of curetting or otherwise removing the carious portion of the bone. While fully believing in the desirability of the removal of every particle of pathological tissue, whether soft or bony, with closure of the wound for primary healing, I doubt if this can often be safely attained. Due regard for the important structures in and around the field of operation demands that with full knowledge of the anatomy we shall be radical in directions where it is safe even to overdo the absolute requirements, but conservative to the verge of timidity as to opening the facial or semi-circular canal, the middle cerebral fossa, or the laternal sinus. Recovery has often taken place uncomplicated by such an occurence; but its needless performance should be regarded as a blunder which might prove disastrous.

The technique of operating should vary with the nature and needs of the case. Usually a liberal incision close behind the auricle, free exposure of the bone and penetration by the gouge close behind the auditory canal *below* the level of its upper margin and the *spina supra meatum* is safest and surest to reach the antrum. The claim of Koerner, that the cranial measurements give any assurance of safety or danger, are wholly unsubstantiated by my far wider study. The advice to operate in any one way, as urged by Küster, with more than the minimum requisite of violence to the integrity of the parts, I unhesitatingly condemn as irrational. The intricate mastoid cavities cannot by any fair thoroughness be surely made and kept aseptic, and extensive areas of freshly-opened bone afford perilous opportunities for septic absorption.

Cases are met where the lateral sinus, covered by the merest film of bone, fully occupies the ordinary field of operation, and it may be even be visible through the intact bone; therefore, close scrunity of the uncovered mastoid is a prerequisite to any penetration. The trephine or drill is being less used by all men who operate often, since study and experience show that in the dangerous cases their use is less safe than the gouge. It remains to be seen how far the mallet can be safely employed, in spite of the advocacy of Schwartze and his disciples; for my part, I expect to use it very rarely. The hand-gouge is safer, though slower, and can be carried through the hardest bone. Within the mastoid the spoon and the burr are the safest instruments for carrying the opening inward, forward, and slightly upward to the antrum. The middle cerebral fossa is rarely as low as the upper wall of the meatus, and never below it, at the point of operation. The facial and semi-circular canals are never less than fifteen

mm. from the spina, and in a large convex mastoid even greater penetration may be safe; but the antrum ought always to be encountered without going deeper. Drainage and access to the antrum is the principal point in the great majority of cases, with extension of the operation in any other direction according to the needs. Irrigation is a questionable measure, both in operation and after-treatment, and is better avoided. Drain-tubes, gauze packings, and open treatment of the wound are unfortunate necessities in most cases, but should be avoided, if safely possible, the free incision being narrowed or closed by sutures. Healing is possible by first intention in a few days; but several weeks of after-treatment is usually requisite; and if thoroughness has not been practiced because of real or groundless fear of doing too much, or the patient's recuperation is poor, months may pass before full healing can be gained. Recurrence may take place under provocation, just as the other ear may be similarly involved; but this will be rare after a proper operation, and, like the occasional deaths, will be in spite of the operation and its real benefits.

Whether operated on or not, mastoid empyema will generally be a very dangerous condition, calling for the fullest skill of the medical man to prevent it, if only incipient, to diagnosticate it, if present, and to treat it and its consequences with fearless conservatism.

DISCUSSION.

Dr. O. H. Allis: I think that in the use of tools each man has his own choice. A sculptor will take his chisel and work as delicately as can be on a piece of marble, almost making eyelashes. I have heard many speak against the mallet and chisel, but give me a sharp chisel and a nice mallet, and I can cut through the skull without injury. If properly handled, the chisel and mallet will not jar the skull. If I were bound to select one instrument for skull injuries, I would prefer the chisel.

Dr. S. MacCuen Smith: It is well to keep in mind those cases of mastoid disease in which the only symptom presented is pain. I will relate a case sent to me from the interior of the State. A young woman, who had suffered with pain for some months previous, was brought to me five months ago. I felt that there was some middle-ear trouble, possibly pus in the middle ear, and advised opening of the drum, which was refused. Two months later the patient was again brought to the city, and admitted to St. Joseph's Hospital, where I opened the drum and found pus. This gave relief for four or five days, and then the pain became as severe as before. With the assistance of Dr. Keen I opened the mastoid and evacuated pus. Since then the patient has gradually recovered. There was no symptom besides the pain. No swelling, redness, or œdema. The pain was referred to the head generally, but principally on the affected side.

Dr. E. La Rue Vansant: I agree with the statement made by Dr. Randall, that a small percentage of cases require mastoid operation. I think that the treatment which he has advocated in the milder cases, will generally avoid mastoid complication. I think also that an incision down to the periosteum (Wilde's incision) will often avoid further involvement of the mastoid, and I have had a number of cases where I have made such incision, and obtained the most favorable resnlts, without further operation.

I regret that Dr. Randall has not seen fit to announce the results of these operations.

Dr. Ernest Laplace: I have operated on five cases of mastoid disease, using the surgical engine. I do not see how you can guide any instrument better than the surgical engine and burr, which acts simply as it is pressed.

The conditions for operation and the results of operation vary with each case. It is simply a matter of opening a bone abscess, and doing as little harm as possible while scraping and sterilizing the abscess cavity.

Dr. B. Alexander Randall: I am hardly prepared to discuss the value of Wilde's incision. It is highly lauded, but I have rarely done it of late years. Under careful exploration, I have usually found the bone softened, and often an actual opening, so that I have rarely been able to limit myself to Wilde's incision. In the group of cases earlier in

my practice, where I primarily made only a simple incision, I found myself within a few days or weeks compelled to open the bone.

The surgical engine has its uses, and unquestionable advantages. Dr. J. Orne Green, whose experience is the largest in this country, and probably the largest in the world, uses it habitually after laying the mastoid open with the chisel. He formerly used the mallet, but finally abandoned it. Its advocates employ it in various ways, striking the blow in carefully chosen directions with a light tap, and using a mallet with a spring handle ; yet serious or fatal shock has seemed to depend upon its employment.

The surgical engine has the disadvantage of being unwieldy. If we use the gouge, we can readily carry our instruments with us from place to place, and have in a pocket-case all that may be required for any operation. The visibility of the work has been referred to. While I make a large incision, it has never been my fortune in these thick œdematous tissues to get and hold a fully satisfactory view of the parts being operated upon, particularly when one gets into the diploetic bone, where there is much oozing.

The results have been asked for. I do not think that I have had sufficient experience to put forward my results as containing anything of special value. The results of the men who have done their hundreds of operations have sufficiently set forth the matter. Schwartze lost 10 per cent. of his first one hundred cases, and 4 or 5 per cent. of his subsequent cases, because he now uses the operation in other than the desperate cases. That I know of only two deaths in these fifty cases does not mean that others may not have since died ; but I can safely assert that very few of these cases died of the original trouble, although, as shown by the specimens presented, I have followed to final death quite a group of them. I gave my results in a series of thirty-two cases reported to the American Medical Association last year. All but four of the cases were cured ; cured of the mastoid disease, cured generally of the tympanic surpuration, and cured often of the impaired hearing ; yet the impairment of hearing, the paralysis of the facial muscles or other lesions, sometimes prove irremediable. Two of the cases died, and in one that I know of, the disease recurred. One case, seen with Dr. Thorington, was similar to that reported by Dr. Taylor. At the first operation I satisfied myself with evacuating the neck abscess and the digastric collection curetting out of the carious mastoid, and syringing freely through the tympanic cavity. Three months later I had to operate again. I then opened through the intact cortex and secured thorough healing.

In one case there was recurrence at the end of eighteen months, after sea-bathing, apparently a clear recurrence unassociated with the original trouble, and, therefore, one which should be regarded as *de novo*. In the interval, there had been entire freedom from suppuration, although the patient had undergone a cold-taking, which set up suppuration in the opposite ear.

In one case the suppuration broke through the roof of the tympanic cavity, giving rise to fatal brain abscess. This is the only case of brain abscess that has occurred. In was unannounced by motor or other symptoms.

Dr. Taylor : I wish to urge most strongly the advisability of opening the mastoid and not simple incision. I saw, last year, a young child who had inflammation of the middle ear, following influenza. It was treated by a gentleman who apparently did not appreciate the necessity of opening the mastoid cells. In a short time the child had a cerebeller abscess and died very promptly. In making the post-mortem, I could readily trace the course of the infection from the mastoid, along the bloodvessels into the cerebellum. Where there is such disturbance as would warrant interference, it seems to me that opening the mastoid would increase the danger very slightly, and would greatly increase the safety of the patient.

EVANS (*Lancet*) reports the recovery of a case of pernicious anemia, under the transfusion of defibrinated blood, with two per cent. solution of sodium phosphate.

REPORT OF INTERESTING CASES IN ABDOMINAL SURGERY.[1]

By M. PRICE, M. D.

DR. HENRY LEAMAN has kindly consented to allow me to report this case of mechanical obstruction of the bowel, as it is one of great importance, and it is his report I give and not mine. You will remember a similar case reported for the same trouble nearly two years ago, and as that case was one that many thought strongly reported, I thought best to call your attention to this one reported by Dr. R. Leaman, and operated by Dr. Henry Leaman, and I had the pleasure of assisting in the work.

DR. LEAMAN'S REPORT.—I was called to see Thomas P. on November 1, 1892, who presented the following conditions, viz.: retention of urine relieved by the catheter, no passage from the bowels for three weeks previous, when he had done heavy lifting and active work. My idea was that there must be invagination or twisting of the bowel, and treated him after the usual methods both by mouth and rectum, still nothing in way of relief was accomplished; the enlarged abdomen grew until the tympanitic condition gave place to a slightly dull note everywhere over the abdomen on percussion form excessive distention.

The vomiting, which was always present, now became somewhat stercoraceous. Respiration became shallow, rapid, and feeble from the encroachment of the diaphragm. Pulse feeble, mind wandering. But with all this the temperature never rose above 100°. On November 10, 1892, I called in my brother, Dr. Henry Leaman, in consultation. It was at once decided that nothing but an operation would give the patient any chance. Dr. M. Price was asked to see the patient and assist in the operation. All abdominal pain had ceased about three days.

The operation was done in a little room in Carleton Street, and, as usual to the location, the environments were not of the best. The patient was taken from the bed and placed on a table and a median incision made as in abdominal operations; the bowel enormously distended with liquid. A search was made for the point of obstruction, but I could not find any. Dr. Price also made an effort to find the obstruction. Failing to find one, we decided to open the bowel and empty out its contents and then make a thorough search for the obstruction. This also failed. The bowel was carefully stitched and the patient put to bed. In the next forty-eight hours he had about thirty evacuations. The bladder had to be relieved with a catheter. He made an uninterrupted recovery.

Mr. K., patient of Dr. Romaine, of Lambertville, N. J., aged thirty-two years, had had a number of recurring attacks of severe pain in the region of the appendix, all of which, save the last, have yielded in two or three days to purgation by salines. Last attack occurred May 2, 1893, and he was at once freely purged. This gave considerable relief; but the pain would return in twelve or fourteen hours in as much severity as ever. It was then decided to have an operation, and I was asked to operate.

May 7. I carefully examined the patient, and from the history and the existence of peritonitis, and the fact that all his pain and suffering came from the region of the appendix, also that he had had a number of attacks with the same symptoms, I did a section and found from three to four feet of ileum adherent in mass over the head of the colon, greatly adherent and covered with inflammatory lymph. There was some pus in the mass, but very little. The bowels were completely separated, washed and replaced, and then the appendix looked for and found in a hard mass curled up and adherent to the head of the colon on one side and to the pelvic bone on the other. The adhesion to the pelvis was loosened, the appendix and bowel were brought out, but the bowel could not be removed without great injury: So, with a thorough irrigation of the peritoneal cavity, stitching of the lower end of the wound, the hardened mass at the head of the colon, with the appendix attached, was placed directly under the upper edge of the wound and over it a gauze drain, which was left in place for thirty-six hours; afterward dressed daily.

[1] Read before the Philadelphia County Medical Society, May 24, 1893.

Patient had no increase of temperature or pulse after operation, and made an uninterrupted recovery.

Mrs. H., aged forty years, suffering from great nervous prostration, constant pelvic pain for the last two years She was treated by Dr. Peltz, her family physician, with great patience and care, but without any lasting benefit.

I examined her in February in consultation with Dr. Peltz, and found no marked pelvic disease—nothing that warranted an operation. In one week after my visit she was examined by a Philadelphia gynecologist who used an instrument to measure the depth of the womb, and its freedom from adhesions. The instrument gave her violent pain and greatly increased her suffering. May 4th. I again examined her and found the uterus fixed, and on the left side a large fluctuating mass—right side adherent. May 6, 1893. I did a section and removed a large ovary and tube distended with blood-clot, contents measuring about half a pint of decomposing blood and pus; the right side a pus tube.

How much this trouble was due to a previous existing disease, or how much to the intra-uterine examination, I leave you to judge.

Herbert H., son of Dr. H., of Pemberton, N. J. Appendicitis. Operation; drainage; recovery. This is the third case in eight months that I have seen in the hands of this physician—two operated on and recovered. The third, a young man nineteen years old. When I was called he insisted he was much better, and would not submit to operation. He had well-marked symptoms of abscess of the appendix. He continued to improve, and for three months afterwards declared to Dr. H. that he was perfectly well. While unloading a can of milk he felt something give way in the right inguinal region and died in twelve hours, before anything could be done for him, of peritonitis.

DISCUSSION.

Dr. Joseph Hoffman : Dr. Price stated that in the cases on which he had operated he had not met with high temperature except in two instances. The question of temperature is an interesting one. In one of the most serious cases of appendicitis the temperature was not markedly high, although there was gangrenous gut and abscess. The pain and tenderness were, however, marked. I have seen a case in a young child where the temperature was abnormally high.

With regard to operation : I am puzzled to decide in what cases operation should be done. I have seen cases in which the condition seemed to be imminent recover without operation, and I have seen cases apparently parallel die. Where the line is to be drawn between the cases that will recover under medical treatment and those in which operation is required is difficult to decide. Within a week I was called to see a boy eighteen years of age in a second attack. There was high temperature and a mass easily to be made out. The bowels had been bound up, and no relief was afforded by anything that had been done. I put the boy on purgative medicines and within forty-eight hours there was reduction of temperature, and in another forty-eight hours the abdomen was perfectly pliable and the boy apparently well. I suggested operation, but it was not accepted. Whether or not this trouble will come back, I cannot say.

Dr. Addinell Hewson : I have made some investigation in the dead body with reference to the position of appendix. I examined some 74 bodies. In this number I found evidences of appendicitis of more or less severe degree in 23 cases. Only I showed that there had been operative interference. The investigation was not made to determine the presence of appendicitis, but simply to obtain anatomical data by which the position of the appendix could be more definitely reached. The position of the appendix varied considerably. In one instance it was in contact with the under surface of the liver. In many instances it was in the cavity of the pelvis. In many it was above the crest of the ileum, and in the majority of cases the base of the appendix was above the inter-iliac line—that is the line drawn from one anterior superior spinous process to the other. I made some notes in reference to other points in connection with the appendix, but they are not germain to the discussion. I merely wish to re-

call the fact that there were evidences of appendicitis in 23 of the 74 cases.

The results of the examinations will be published later in the *Amer. Jour. Med. Sciences.*

Dr. Daniel Longaker: It seems to me that the last case reported is only explicable on the assumption that as a result of rude manipulation some focus of pre-existing disease was disturbed, or, if the trouble was not produced in that way, it must have been set up by the production of endometritis and extension from this point. I assume this from an experience that I have had. A woman supposed herself pregnant and introduced a knitting needle into the uterus. She experienced no pain at the time, but in the course of a few weeks there was severe suffering and septic endometritis. Whether or not she was pregnant was never ascertained. The inflammation soon extended and involved the tubes, and in a few weeks there resulted a large tubo-ovarian abscess and a decided attack of pelvic peritonitis. The trouble was promptly removed; but I may say that the endometritis still lingers, and will probably require a second operation, that of curettement. I would ask whether or not this condition exists in the case referred to by Dr. Price.

Dr. James Collins: Regarding the relations of medical and surgical treatment in appendicitis, I am sorry to report that I have seen several patients die in whom I had advised operation, but was overruled by the medical attendant. I have seen one or two saved, but that is such a limited number that I dare hardly speak of it in connection with the number of cases reported to-night. I suspect that it is safe treatment where the obstruction and symptoms of appendicitis continue after the second day, to consider the advisability of surgical interference, and especially so if there is present a sign not often mentioned, which in the male is pain in the line of the cord and testis. In one or two cases the medical attendant has taken the ground that because there was no high temperature there could not be any very serious inflammation in progress. I have for many years advocated operation in appendicitis, and I have said that I would never let another case where there were evidences of peritoneal inflammation die without operation.

The President, Dr. De Forest Willard: I am glad that Dr. Price emphasized the point of low temperature which is so common. It seems that in these cases the temperature is positively no indication of the severity of the case, and is not to be relied upon unless it is very carefully watched. There are certain cases where, if it can be watched day after day, it then becomes an important element in diagnosis and prognosis.

In common with Dr. Hoffman, we are all seriously puzzled to draw the line between the cases that will recover without operation and those which should be operated upon. This subject cannot be discussed too frequently, and every case should be recorded and thoroughly considered and studied.

Dr. George E. Shoemaker: The point of diagnosis is one of great interest, and those who have had surgical experience with appendicitis should emphasize the fact that there are no signs which are absolutely reliable. Dr. Willard will recall a case which I recently reported, and which he afterward saw, where there was gangrene of the appendix and where there was no tumor; where there was no tenderness in the rectum, and where there was no tympany. The belly was scaphoid, and yet there was gangrene of the appendix, with perforation. I was utterly deceived as to the necessity for operation in a case which occurred several years ago. A German woman of exceptionally good physique, and whom I knew to have no uterine or tubal disease, was suddenly taken with chill and pain in the right iliac fossa. The temperature was up to 104°, and the symptoms persisted for four days. I considered the case to be one of appendicitis, feared pus, and advised operation. I had a consultant who also advised operation. The patient refused and asked to see still another consultant, and in the twelve hours of consequent delay her condition completely changed for the better, the temperature went down, and in time she made a complete recovery without operation. Within a few days the patient passed pieces of tapeworm which probably had been the exciting cause of the appendicitis. As

contrast to this unexpected recovery, on the very day of my proposed operation a young man died in this city because he had a pint of fetid pus about his appendix, and because one of the most capable diagnosticians anywhere denied its presence till too late. The great majority of cases that I have been called upon to observe have gotten well without operation, because pus did not form. But the attacks recur. This question is one of gravity. A gentleman came to me today to know what I would advise in a case which I had seen some years ago with him. The patient then had appendicitis and recovered, but the attacks have recurred, gradually becoming more severe and the intervals shorter. I said that in such a case operation would be advisable; but each case must be studied by itself. There are no definite rules, and never will be.

Dr. William M. Welch: I have seen a few cases of appendicitis, and recall some four or five that have recovered without operation, still I am inclined to think that surgical interference is a matter to be thought of in all such cases. Last summer I saw a case in consultation where I proposed that a surgeon be sent for with a view of considering the propriety of an operation, but the patient positively refused, and after suffering for two or three months recovered, as I believe, perfectly. One of my cases, a child, developed an abscess which discharged through the umbilicus for a considerable time, but even this was followed by recovery.

You will remember, Mr. President, that a year ago a discussion took place here on this subject, and that the surgeons insisted that an operation should always be thought of, while the physicians held that surgical interference was required only in a small proportion of cases. There was present at that meeting a layman of considerable prominence who told me the next day that he was deeply interested in the discussion, as he had recently gone through an attack of appendicitus; that the surgeon who was called in consultation advised operation, while his attending physician opposed it. He said he followed the advice of his physician, and is glad he did so. I mention this to show that recovery from appendicitis may follow medical treatment when surgical interference is thought necessary.

Dr. James P. Mann: I wish to say a few words in regard to two cases that have come under my notice. One was a physician, a friend of mine, and a man of considerable surgical experience, especially in abdominal work. He simply felt sick, but had no pain and no elevation of temperature. There was a little constipation. A diagnosis could not be made, until, finally, Dr. Wyeth, of New York, inserted his finger into the rectum and found a soft tumor on the right side. He then hazarded a diagnosis of appendicitis. The case was operated on and twelve ounces of pus removed, with recovery.

The second case was that of my son, two-and-a-half years old. He was taken sick in the night and appeared to have a little pain in the abdomen.

The temperature remained normal. The case was seen by Drs. Joseph Hearn, A. G. Hinckle and Allis. For the first three days there was some obstruction of the bowels, but that passed away under simple treatment. The child seemed to be improving, but at the end of a week he suddenly went into collapse and died rapidly.

The post-mortem showed that there had been appendicitis with rupture and general peritonitis, and all this without any symptoms of appendicitis that could be appreciated.

Dr. G. Betton Massey: I have seen two cases of appendicitis that have led me to certain conclusions in the matter. The first one was a gentleman of prominence in the city, who had been nursed through seven attacks of appendicitis. This man was almost black from the prolonged use of nitrate of silver. Some months after I saw him he died in a recurrent attack.

The second case occurred recently in a young woman. The attack was diagnosed by myself and others as a second attack of appendicitis. I advised the patient to put herself in the hands of a surgeon for operation after recovery. This she did not do. Three months later she had another attack and died. Of course, this is a small number of cases to form a judgment upon, but it leads me to the conclusion that surgery is the best treat-

ment, at least after the second attack—not during the attack but in the interval.

The President, Dr. De Forest Willard: Dr Welch is in error in intimating that the surgeon, "of course, urges operation." A few years since the subject was discussed independently by two societies, the Association of American Physicians and the American Surgical Association. The consensus of opinion in the surgical society was rather against the operation; that it was an exceedingly difficult and dangerous one, and that it often was impossible to find the appendix; while the physicians strongly advised operation, and the speakers considered it to be perfectly simple, and held that no one would have any difficulty performing it. From my own experience, and I have seen a large number of these cases in the past few years, I am sure the surgeons refuse operation in a far larger number of cases than they operate upon. The surgeon is often obliged to restrain the physician in his desire for operation.

Dr. Price: In my estimation there is only one treatment for appendicitis. I do not mean by appendicitis simply irritation of the appendix, but I mean inflammation of the appendix going on to ulceration and rupture. One physician asserted, in the discussion referred to by Dr. Welsh, that if all these cases were operated upon there would be 20 per cent. more deaths than at present. The operations of surgeons in this city will positively refute that statement. I can give a hundred cases in the hands of a dozen men with not more than ten or twelve deaths. An appendix operation has no business to kill, and the man who cannot find the appendix does not know where the appendix is, or he has another condition, in which he has no busiuess to hunt for the appendix. If there is an abscess at the head of the colon, with the peritoneum shut off, it should be opened, washed out, and packed, and the patient will get well.

With regard to the symptoms of appendicitis, I think that they are plain. If in the first twenty-four or forty-eight hours you find a tumor, that is not appendicitis. An abscess of such size does not form in so short a time. There may be high temperature—that has nothing to do with appendicitis necessarily. There is an impacted colon and something irritating the colon. The administration of salts persisted in until free evacuation of the bowel is produced, cures the patient. If called to a patient with symptons of appendicitis and you administer a purgative, and coming back after free purgation you find the mass and swelling, and the patient no better, "you have a case of appendicitis every time;" you have an abscess forming at the head of the colon. It is your business to cut down and drain that, and if you open the peritoneal cavity it does not matter. If you wash out the peritoneal cavity and put in a gauze drain the patient will recover. When you find a man with a pulse of 170, with a grain of opium, or two or three grains a day, with all the symptoms smothered, with a mass in the right iliac fossa, and a temperature of 97°, let him alone. Such a patient is beyond all possible chance of recovery.

We must recognize that all the troubles in the right iliac fossa are not appendicitis. Unless we have positive proof that there is trouble we should not interfere.

In regard to Dr. Welch's cases. Patients do recover with abscess at the head of the colon, but is that treatment. Because now and then a man falls off a house and is not killed, it does not follow that that is a good way to get down. We have no business to call that treatment. It is our duty to do that which we find best for the patient, and not run the risk of having the abscess break into the colon or other viscera, with matting together of the bowels and crippling the patient for life. A short time ago I saw, in Albany, one of the cases which Alonzo Clark reported as appendicitis cured by opium. The man said to me that he had carried that appendicitis with him ever since. It ruptured into the bladder, and he passed feces for six months. Such cases as this are a proof that we should relieve these cases, and do it early in order to avoid those fearful accidents which Nature in her attempt to save life brings about.

I doubt whether Dr. Hoffman's case was one of genuine appendicitis. There was trouble there at the head of the colon, with inflammation and tumor.

Dr. Musser had one of the most typical

cases of appendicitis without rupture I ever saw. The patient had had three or four attacks every year for several years. Dr. Musser diagnosed appendicitis. In all the attacks except the last the patient was relieved by free purgation. Dr. Joseph Price was then asked to operate. Not being able to find anything in the pelvis or abdomen, he was in doubt, but Dr. Musser insisted that something must be done. The abdomen was opened and the tubes and ovaries found healthy. The appendix was not adherent and looked well. It was caught with hemostatic forceps and tied off. On squeezing the removed appendix the nastiest pus could be squeezed out of it.

In the seventeen cases on which I have operated, I did not remove the appendix but twice. The trouble is, that we do too much surgery. A surgical operation for pus at the head of the colon, from any cause, if done in time, should not have one per cent. mortality. We have come to the point where there is but one obstructor in appendicitis' cases, and that is the general practitioner consultant.

Dr. George I. McKelway exhibited a portable and convenient frame for Trendelenburg's position.

THE DIAGNOSIS AND TREATMENT OF FRACTURE IN THE NECK OF THE FEMUR IN PERSONS IN ADVANCED LIFE.[1]

By OSCAR H. ALLIS, M. D.
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THERE is no department of medicine in which results are uncharitably, not to say unjustly, criticised than in injuries of the bones and joints; and in no department is one so frequently called upon to defend himself in the courts.

Fully alive to the importance of the subject, authors and teachers lay great stress upon the importance of diagnosis, and enter into practical minute detail in regard to treatment.

Proper as such a course may be in middle life, and in most fractures, I think it possible to show that in the particular fracture under consideration, great, even irreparable mischief may be done in attempts to establish a diagnosis, and that death has not infrequently been the fruit of a blind and too strict adherence to rules.

My subject embraces but two topics for consideration, viz.: Diagnosis and Treatment, and both are to be handled with special reference to the period of life at which the accident is supposed to occur.

a. THE DIAGNOSIS.

This I shall discuss under three subdivisions: I. History of the case. II. Inspection (*i. e.*, passive measures). III. Manipulation (*i. e.*, active measures).

I. HISTORY OF THE CASE.—*Age.* After sixty years of age dislocations of the hip are rare. I have seen but one dislocation after that period, which was in a female. Indeed so rare are dislocations after fifty years of age (especially in women), that one may reasonably doubt the possibility of their occurrence. If this is probable at fifty, it becomes reasonably certain that at the age of seventy or eighty, an injury, whatever it be, cannot be a dislocation.

The nature of the accident. If a person be thrown from a rapidly moving carriage, or drop a considerable height, sufficient momentum will be created to make any variety of accident possible. But in very many cases the amount of momentum is not sufficient to dislocate a joint. An aged woman slips from a chair, falls to the floor, and is unable to rise, or in walking along the floor catches her foot in the carpet; she may not even fall, for she may catch hold of something. Cases are on record of aged females turning in bed and immediately complaining of pain in the hip attended with helplessness. One of the most frequent causes of hip injuries is a fall from the standing posture. Now in none of these instances is sufficient momentum created to cause a dislocation, and hence one can, from the history in many cases, exclude dislocation as a possible result of the accident.

Helplessness. In all cases where a person is rendered immediately and totally helpless, some grave injury must be predicated. I say immediately and totally. The word immediately may apply to any accident, but "totally" requires limitations. One person will fall, fracture the neck of the femur, rise with difficulty,

[1] Read before the Philadelphia County Medical Society, May 10, 1893.

and by the aid of a friend or a cane walk home. Another cannot rise. Now I say that so far as the hip is concerned, both are totally disabled. If you observe the mode of progression you will see that scarcely any weight is placed upon the lame limb. I have placed my hand on the floor and asked such a one to step upon it and bear the entire weight upon it and have thus demonstrated practically how little dependence the patient placed upon the injured limb. If the patient is lying in bed the degree of helplessness may be detected by asking her to flex the limb, or raise it full length from the bed. The imperfect, ineffectual effort, the insinuation of the sound toes beneath the ankle of the lame limb, are eloquent confessions of helplessness.

II. INSPECTION.—The patient lying in bed, the two limbs lying parallel, and both of them for their full length touching the bed all the way down, no possible dislocation is present. On the other hand, if the suspected limb lie parallel with its mate, and full length upon the bed, but at the same time it is shorter and everted, you have good reasons to suspect a fracture; and if the injury occurred in advanced life and from a trifling cause, the seat of the fracture is above the shaft—it is the neck of the femur. Eversion of the foot may not be present, but if you ask the patient to invert it no result will follow.

III. MANIPULATION.—Thus far the physician has not placed his hand upon his patient. Thus far he has, at least, done him no harm. I am now to take up the active positive measures recommended by authors and teachers which are two often followed blindly and to the patient's detriment.

1st. To prevent unnecessary pain, to overcome the action of muscles, an anæsthetic is often advised. For what purpose; to restore a dislocation? No, but rather to enable the examiner to elicit *crepitus* and to establish beyond a peradventure the presence of fracture and its exact seat. Surgeons have written learnedly upon the differential diagnosis between intra and extra-capsular fractures, and to be dead-sure, ether, they say, must be administered.

Of all the signs of fracture none is more difficult to elicit or more uncertain than that of crepitus. The short fragment is usually not more than an inch in length and perfectly movable in all directions. If, as a fortunate result of the injury, the fracture is impacted, partially attached by bone, or by periosteum, then the short fragment will follow the long fragment and no sense of crepitus will be elicited. But the examiner, fully alive to the importance of determining positively the nature of the injury, and knowing that he has abolished pain with his anæsthetic, lifts the thigh vertically and then depresses it, repeating the manœuvre until he is sure of a sense of grating; while to locate the injury, to fix the precise direction of the fracture, to be able to say that it is intra-capsular or the reverse, the examiner requests an assistant to rotate the flexed or extended limb, while he studies the axis upon which the shaft revolves. One surgeon will satisfy himself that fracture is present by rotating the flexed thigh far beyond its normal possibilities, while another, to be certain, hyper-extends the thigh. And all this in a person seventy or eighty years of age, that does not exhibit a single symptom of dislocation, the only result of an injury that may be benefited by an anæsthetic, or may suffer from delay. I therefore cannot too pointedly condemn the employment of an anæsthetic when there is no single symptom of dislocation, nor too earnestly condemn all rude efforts, after fracture is suspected, to establish its exact locality.

From the history of the case and from inspection, the physician may strongly suspect fracture. It is important to have more than a suspicion. It is important that the diagnosis be reached, and that, too, without mischief or unnecessary pain. To do this no single symptom is, in my judgment, equal in value to that furnished by the fascia lata. This very important structure has a value in locomotion and in the erect posture that few appreciate It consists of a strong, pliable, but inelastic structure, with a function akin to that of a ligament, and extending from the crest of the ilium to the outer tuberosity of the tibia. In its course it passes over the great trochanter and sends a process of attachment throughout the whole length of the femur. This fascia possesses signal value in enabling man to stand, restfully upon

a single limb. It is of the utmost importance that every physician in general practice should study this fascia, and he can do it best on his own person. Now, in case of fracture of the neck of the femur this fascia will be relaxed. It can readily be ascertained while the patient is recumbent, by gently adducting the suspected limb; under normal circumstances adduction makes the fascia tense. If it cannot be made tense in the injured limb as it can be in the sound, if the fingers can be depressed above the injured trochanter and are resisted upon the sound side, we have a most conclusive demonstration of fracture of the neck of the femur.

In concluding what I have to say upon diagnosis, I will say that in the aged, a slight fall rendering the patient helpless, with the limbs lying parallel, shortened, eversion, and a relaxed fascia lata, all the elements of the problem are present and the conclusion that fracture is present is irresistible, and the diagnosis has been reached without entailing unnecessary pain or aggravating an injury, at best permanently crippling.

b. THE TREATMENT.

My subject on this point must not be misunderstood. It is not treatment of fracture of the neck of the femur, but treatment of fracture of the neck of the femur in the aged. If the last clause is omitted, or for a single moment left out of the problem, the result may be disastrous.

In the treatment of fractures generally, the cardinal principles are *fixation* and *rest*. The important question is, Can prolonged fixation be attained in fracture of the neck of the femur in the aged and feeble? What are the conditions? An aged woman, often with an incontinent, irritable bladder, if she lie quietly upon her back, with splints to hold the limb still, she must be disturbed when the draw-sheets are changed; and no matter how often this is done, the whole sacral region is doomed to constant maceration. This, in a person of feeble circulation, and the result is pressure, sores within the first week of treatment. Then what? Oh, of course, remove the splints. But would it not have been better to have protected the patient against bed-sores? No one will ever know the number of deaths due to bed-sores, the result of treatment of fractures of the neck of the femur by means of splints and confinement.

What then is to be done? If I were to give a universal rule, I would say, *treat the patient, not the fracture.* But it is asked, What result will follow from non-treatment of the fracture? Let me mention the history of a few cases:

CASE I.—A man, about seventy years of age, fell through the board-walk at Atlantic City, and was unable to rise. He was seen a few hours afterward by a physician of large general practice, who assured the man that he might congratulate himself on having broken no bones, and that he would soon walk as well as ever. He remained at Atlantic City seventeen weeks, with no other treatment than such as would be proper for a bruise, after which he returned to Philadelphia, where he visited the Pennsylvania, Jefferson, and Presbyterian Hospitals. Everywhere he went he was told that he had sustained a fracture of the neck of the femur, and that now he would do as well to move about and regain his strength. Remember, that this man had no treatment for fracture from first to last, and to-day he can go up and down stairs without taking hold of the banisters or the help of a cane.

CASE II.—Dr. Edwin Graham asked me to see a case that three months before had fallen upon the icy pavement. He arose with great difficulty and was helped home. Thinking he was only bruised, he sought no medical advice, but finding, at the end of three months, that he was still lame, he sent for his physician. This man was lame, but walking all about. He had only remained in bed for three days, after which he rose daily and sat about in chairs. Result: as good a limb as could have been secured by the most elaborate fracture-aparatus.

These cases could be supplemented by others from the experience of every general practitioner, and the lesson to be derived from them is an important one. The patient unsurgically treated, treats himself surgically and scientifically. Owing to the pain in the hip he is obliged to move with great care and deliberation, but regarding the injury as only a bruise, he asks to be helped out of bed, for he argues that he is as well up as in bed.

Thus bed-sores are averted, while by deliberate, gentle movements no possible harm is done to the efforts at repair.

Following what I may denominate the "no-fracture-treatment plan," I turn my patient on her sound side the day after the injury. I do not turn the trunk a little, leaving the hips undisturbed, but I turn her fully on her side, usually placing a pillow between the knees for the purpose of comfort and of steadying the injured limb. This turning on the side should be attended to promptly, no later than the second day. It is a painless procedure and yields *so much comfort*. If the patient is doing well get her up upon the chair when her bowels shall require it. In this the general constitutional condition must be considered. The shock of fracture in the aged must not be undervalued. It requires days, even weeks, sometimes, for such persons to rally, hence the physician will act wisely if he considers the age and feebleness of his patient. There is less need of haste if there is nothing to fear from bed-sores, hence daily, or even twice daily, turning the patient upon the sound side will make it possible to delay getting the patient out of bed.

When the patient can bear removal to a chair, I attend to it myself. This gives the patient confidence and teaches the nurse. While the nurse takes the body, I take both limbs, and turning the patient, I bring the legs to hang over the bed. She then puts both arms around my neck, and I place both of mine around her body. She is thus assisted to stand, and turning slowly around, is seated in a chair provided for her. If this is done without haste or excitement, she will not wait for an invitation for a second outing. This will give time to air and fix her bed, and will also have a tonic effect upon the patient's whole system.

I am not now asking you to subscribe to a theory; I am recounting a practice that I adopt in public and in private, and of whose good results I can show many cases.

Let me mention one that bade fare to be most unpromising:

CASE III.—Mrs. J., seventy-two years of age, was knocked down at market and brought home. I saw her in consultation with the late Dr. Roger Keys. She looked older than her years, from the effects of a disease (paralysis agitans). Incessantly during waking hours her head nodded, her arms shook, and her legs danced. This woman was put in bed on Saturday, and on Monday, two days later, a small red spot appeared upon the sacrum—the initial step toward a bed-sore. This remained for weeks, never getting larger than a three-cent piece, and not going deeper than the true skin, but was prevented from spreading by daily turning the patient on her sound side, and in about ten days getting her out of bed into a chair. Had this patient been confined to bed with a fracture-apparatus for a single week, a large bed sore would have undoubtedly been formed. Result of treatment: patient able to walk up and down stairs.

Another case is as follows:

CASE IV.—A clergyman, eighty years of age, was knocked down by a passing carriage. No attempt to confine patient to bed. In consultation with the late Dr. McMurray I saw him from the first and throughout his housing. He was out of bed within the first week, and then daily. Result: walked again, up and down stairs, and, old as he was, returned to his pulpit duties.

Cases like this prove that the let-alone treatment insures excellent results, while it relieves the patient of a vast degree of discomfort, to say nothing of more serious results.

What I have said must not be construed as a wholesale condemnation of surgical appliances. What I specially desire to emphasize is that the life and future of the *patient* is of more value than the broken bone; that the bone will take care of itself if the physician takes care of his patient. If surgical appliances are employed, let them prove their excellence by increasing the *comfort* of the aged sufferer. If implements are employed, those are best suited that can be entirely laid aside daily while the patient is turned on her side for a rest, or placed in a comfortable chair.

I am now about to make a remark that many of you will accept with caution, it is this: that nature never intended intra-capsular fractures to unite with bone according to the process she adopts in fractures of the shaft.

1st. She has inadequate nutriment for bony repair. The short proximal frag-

ment is almost without vascular support. To this, it will be replied that the artery of the teres ligament supplies it. Even were this true, the nourishment is scant for such a work. But I do not accept the theory that the head of the bone gets its supply from the teres tendon. The tendon is absent in the elephant, in the anthropomorpha, in the South American sloth, in the orang-outang, and occasionally it is absent in man. I believe the ligament has another function and does not contribute to the food-supply of the head of the femur.

2d. What would be the result if fractures of the neck united according to the laws of fracture of the shaft? In fracture of the shaft the provisional callus is often twice the diameter of the bone, and bone, periosteum, fascia, and muscle are all melted down in the inflammatory process. How would this work in fracture of the neck? How would the femur execute its movements with a neck twice the diameter of the head? Such a condition would invite re-fracture, or abridge to a great extent the movements of the bone.

The let-alone treatment is no new mode of practice; it is as old as Sir Astley Cooper, and I believe is based on sound hygiene and pathology.

DISCUSSION.

Dr. William Hunt: I have been particularly pleased with the whole paper, and unite cordially in almost all the views expressed. They agree thoroughly with the practice that I pursue. I was particularly pleased with the last statement, which is one that I have advocated and written about many times; that is, wherever throughout the body there are more important structures lying under the injured bone, there is an exception to the ordinary method of repair. In fractures of the cranium we have no callus to any extent. You find the case is true in the elbow, the hip, the patella, etc. If you go through the body, wherever you find this exception to the ordinary rule, you will find that the presence of callus would do infinitely more harm than the injury to the bone.

From a considerable experience with these cases, I am no believer in the power of absolute diagnosis as to whether the fracture is within or without the capsule. Hence, whatever treatment is required, I favor it as though it were partially outside, so as to gain every advantage. I have treated many cases in this way, with very good results.

Dr. William S. Stewart; I wish to give a little experience that I had ten or fifteen years ago. I was called to see an old lady who had tripped on the carpet, and fell on her hip. I readily discovered a fracture at the neck of the thigh-bone, within the capsule. At the request of the family, a surgeon saw the case with me, and confirmed the diagnosis. The limb was then dressed according to his recommendation by the method then in vogue—extension and counter-extension, some fifteen pounds weight being applied. She suffered the torture produced by this for twenty-four hours. The next day I reduced the weight to five pounds. The family had become dissatisfied, and I said I would turn the case over to the surgeon, if they would first call in Dr. Agnew to see that nothing improper had been done. After Dr. Agnew had examined the patient, and expressed his opinion to the family (stating that there would be no bony union), they begged my pardon, and requested me to continue in charge of the case, which finally, at their earnest solicitations, I agreed, provided that I be permitted to do what I thought best. I then took off all the weights. The result was that in six or eight weeks the patient was out of bed, with good use of the limb, able to go about, and go to market and carry a heavy basket, until a year or two since, when she died from some other cause.

Having had this experience, it opened my eyes to the treatment of such fractures. I do not hesitate to treat all my cases, young or old, in that way, by adjusting the limb between the sand-bags, and keeping the patient quiet. I have several cases to which I can refer, who are now in perfect health, are able to run or walk, and have good use of their limbs, and were not tortured to death by the old method.

Dr. John B. Roberts: I feel sure that many people have been woefully damaged by meddlesome surgery in the attempt to make a diagnosis between intra- and extra-capsular fracture. Such a diagnosis often cannot be made by anybody, and if it were, it would be of no service. These

fractures should never be subjected to rough movements to make out crepitus or preternatural mobility. A surgeon who cannot readily make a diagnosis of *probable* fracture of the neck of the femur, needs some further education, rather than some further knowledge to be obtained by manipulation of the patient. I have seen demonstrations made in hospital clinics to show crepitus and preternatural mobility, which seemed to me to be almost actual malpractice. I believe that many of these fractures are impacted; and breaking up this impaction takes away the only chance which makes union possible. If the fracture is extra-capsular, you will, probably, under judicious treatment, get serviceable union. It seems to me, therefore, that the points brought forward by the reader of the paper are exceedingly valuable if they impress upon the profession the fact that no ether should be given, and no violent manipulation made in suspected fracture of the neck of the femur, or any suspicious injury of the hip in old persons, unless it be made out that there is dislocation.

I differ somewhat from Dr. Hunt in regard to the explanation why callus is not thrown out. Dr. Hunt's view is that this is Nature's way of protecting more important parts from injury. My explanation is that where there is not much motion, and not much deformity, there is not much inflammation, and where there is not much inflammation there is not much callus thrown out. A fractured rib will often unite without much callus. An extra-capsular or intra-capsular fracture will unite without the formation of much callus if motion is not permitted. A fractured bone, where there is no displacement or motion, unites by first intention with very little callus. Fractures of the shafts of bones are much more liable to be the seat of callus, because, as a rule, such fractures are oblique, and the muscles above and below the seat of fracture have more opportunity to act, and cause deformity and motion.

In the treatment of these fractures, I always put on a moderate amount of extension, which does good in preventing muscular spasm, which often is the cause of pain. For the first week or ten days many of these cases have a good deal of muscular spasm from irritation of the muscular mass and the nerve filaments involved in the injury. I apply one or two bricks, weighing four or five pounds, by means of the ordinary extension apparatus. This gives the patient comfort, and I do not believe that it is torture. If there are bed sores, or incontinence of urine, and it seems probable that the extension is not servicable enough to permit it to be retained, I do not hesitate to take it off and allow the patient to lie in bed with the limb in a comfortable position.

I had a woman, perhaps over eighty years of age, with fracture of the neck of the femur, who could not stand any treatment on account of incontinence of urine and bedsores She got up very early, and recovered with almost perfect use of limb.

It seems to me that the essence of Dr. Allis's paper is that such fractures should not be tampered with, and that it is meddlesome surgery, and even malpractice, to search for preternatural mobility and crepitus.

Dr. J. M. Barton: I have been thoroughly converted to the advantage of the methods described by Dr. Allis, and have used them for a number of years. I usually employ the double incline plane, and get the patient out of bed as early as possible.

There is one point that has not been mentioned, and that is, that confinement to bed is not only unnecessary and a damage to the patient, but it is frequently a damage to the limb. I have seen cases where the limb has been permanently stiffened by such treatment. Not only will the involved joint be stiffened, but elderly people, resting in bed for six or seven weeks, will often have no use of themselves. I remember two sisters whom I treated some time ago. One I treated over twenty years ago, in the ordinary way, and she was certainly almost helpless, and could be raised almost as one piece. The second sister sustained a fracture of the neck of the femur about ten years later. I treated her without extension, and had her out of bed on the third day. She recovered with complete use of herself, and was able to go about with a cane, and occasionally without it.

There is no subject of more importance than this, for these injuries frequently lead to suits for malpractice, and physicians are often criticised by the lawyers because they have used no apparatus in a given case. If it be well understood that the profession do not consider it bad surgery to treat these cases without apparatus, it will be of service.

With regard to mobility being the cause of callus. In the cases that have been here reported there has been great mobility, and where I have had an opportunity to see the ends of the fragments, no callus has been thrown out. In a fracture at the middle of the femur with incomplete fixation, a large amount of callus is usually thrown out, and where the fracture is united we find each extremity very much enlarged, irrespective of the question of union. This does not occur in the broken ends of an intra-capsular fracture.

Dr. G. G. Davis: I was glad to hear the remarks of Dr. Allis on the function of the round ligament, and I agree with him in regard to its lack of importance.

I should like to call attention to the fact that the studies of Mr. Bland Sutton have shown that the round ligament is a regression from the pectineus muscle; in other words, that it is not an active body in itself, but rather the remains of a previous body that was sometime ago of importance in the economy, and for that reason I believe that the many theories that have been propounded in regard to diseases of the head of the bone originating in this ligament, as well as the one alluded to by Dr. Allis, that the ligament aided to any great extent in the nourishment of the bone, are not well founded.

While many of us would be willing to go as far as Dr. Allis does in his liberality in the treatment of fractures of the neck of the femur, I hardly think that we would go the extent that Dr. Stewart alluded to, and treat all our fractures of the femur in the same way as Dr. Allis has advocated in the treatment of intra-capsular fractures in old persons.

Dr. Stewart: I did not refer to any fractures but those of the intra-capsular variety, but this treatment is applicable to all fractures where the adjustment can be maintained.

Dr. Allis: I would say to every one, Do for the case of fracture of the neck of the femur that which will make the patient comfortable. If necessary, put on an extension apparatus, so that for a few hours you can apply a little extension, or apply sand-bags to keep the limb quiet, but take all appliances off at the end of half a day, or certainly by the next day, and turn the patient on the sound side, with a pillow between the limbs, and leave the patient in that position for one or two hours. Then turn the patient back, and if the hip is painful make a little gentle extension. I lay the entire stress upon the fact that the patient is old and feeble, and you must avoid bedsores, and do everything for the comfort of the patient. If you have a partly intra- and partly extra-capsular fracture, or an impacted one, the the movement and change of posture that I speak of will not disturb the fragments, for the short upper end will follow the shaft. My next-door neighbor, an aged lady, fell and fractured her hip, and sent for the first surgeon in Philadelphia at that time. She was put on the extension treatment, and in a couple of weeks bedsores developed, and the apparatus had to be abandoned.

I do not want anyone to understand that I condemn all appliances, but what I wish to impress upon your minds is that I abolish them as the fundamental principle in such cases as I have described, where in many there is incontinence of urine, and the patients are so old that they cannot endure prolonged confinement. In many cases, if apparatus is persisted in, the patient is left more damaged by treatment than by the original accident.

The result of these fractures cannot be predicated from the treatment. One patient in falling may strike the hip forcibly, with the result of severe injury to the bone and other tissues, while another will strike the hip lightly, and produce much less injury. There will be different results, because of difference in the severity of the injuries at the time of the accident. One may suffer with pain for months, while another will have trifling discomfort from the first.

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NINETEENTH CENTURY SENSE.[1]

TO many a busy practitioner it seems that Medicine is an exacting mistress; demanding the utmost of devotion, of self-abnegation, and rewarding her votaries but niggardly, or not at all. Many a man works into it his best, and finds that the best is not good enough to win success. Every hour taken from the "business" of practice is a disadvantage to the business interests, even if spent in collateral pursuits. Nevertheless, if the physician is ever to rise above the place of the mere drugger, he must look somewhat upon the varied panorama of life that is constantly passing before his eyes. And well is it for him if he look not merely with the material eyes, but rather with organs in which has been developed the educated sense. And in just so far as the physician has developed in him the philosophic mind-methods, so will he turn with the keener enjoyment to "John Darby's" book. Dr. Garretson has shown not only that a man can occupy three positions at the same time, and that with distinguished success, but that each of these three can be made to enhance the value of the work done in the others. As a practitioner, he has long stood as the greatest exponent of his specialty of oral surgery; as a philosopher, he has thrown light upon the darkest recesses in which the human soul may grope blindly; while as a teacher, the influence of the young intellects that he has attracted around him has aided materially in the development of his theories, while he has aroused in these young men the dormant powers of thought. Many a youth has come to him to learn anatomy, and has also been taught to think.

This exordium is essential that one may comprehend the reasons for Dr. Garretson's method; which, on cursory examination, appears needlessly involved and obscure. One might say that it must necessarily be so, in dealing with the profoundest topics that have ever occupied the thoughts of man. Life, death, eternity, God, man, and their co-relations! What could one expect but that subjects, which through all time have occupied the greatest human intellects, should be difficult of expression? But this is not necessarily the case; for the grandest thoughts are often expressed in language whose simplicity best displays their sublimity; even as some simple phrases of Beethoven attune the whole soul into such reverential awe as the technical difficulties of other composers never inspire. Dr. Garretson's method is suggestive, because his object is less to demonstrate truths than to arouse thought. Read a sermon of Minot J. Savage, and you cannot imagine anything better stated. He goes straight to his point, with a directness that makes him comprehensible to a child. The reader is left nothing but the task of verifying

[1] Nineteenth Century Sense: being the Paradox of Spiritus Sanctus and of Rosicrucianism. By J. E. Garretson, M. D. (John Darby). 2d Edition. J. B. Lippincott Co., Phila., Pa.

references. Begin a chapter of Garretson, and it is pretty certain that before a page has been perused the reader is lost in meditation, aroused by some suggestive phrase.

In the present edition the author has rearranged the subject matter; though otherwise it is but little altered from the first. The opening chapter is entitled "Spiritus Sanctus." Any sentence in it might form the text of a sermon. The author's dominant idea is bodied forth: that there are degrees and varieties of human understanding and mental insight; that in the conception of a thing we must take into account the capacities of the seer as well as the qualities inherent in the thing itself.

> "A man that looks on glass
> On it may stay his eye,
> Or, if he pleaseth, through it pass,
> And the heavens espy."

The Rosicrucian is he who inquires; who looks beneath the surface, and plunges his regard into the depths beyond. Bits of curious biography are brought in here and there, of Rosenkreus, Robert Flood and Jacob Boehm, of Confucius and Gautama.

"Understanding of hypostases the foundation of knowledge." The term hypostases, or substance, was employed by the Greek theologians to designate the personality of the Godhead; but here is applied to God, man and brute—the latter including soulless man. "The hypostases of gods—meaning by this term perfect men—are Matter Ego, Holy Ghost." Man consists of matter, the body, which he drops at death; of soul, the God-spark, which may be lost by the man; and of Ego, the man himself, that which leaves the body and may lose its soul. As man develops either of these, the others atrophy. Cultivate the bodily appetites and both Ego and soul languish. Develop the self, through its instrument, the mind, and the grosser affections, and the soul as well, become less prominent. But cultivate that divine principle, the spark of Godhead implanted in man, and the lofty self-abnegation of a Xavier or a Gautama is approximated, while fleshly appetites and merely intellectual objects are subordinated. This is the essence of Dr. Garretson's teaching; and surely no purer faith, no nobler aspirations, could be instilled into the human heart.

In the chapter on Matter, it is evident that Berkeley has made a lasting impression on Dr. Garretson, and from his own stores of anatomical knowledge he demonstrates the bishop's idea, and shows how the seeming paradoxes cease to be such on investigation.

The following chapters deal with the problems of modern spiritualism; mediums, their powers, tricks and limits; psychics; and, under diverse headings, the subjects over which modern thought is most exercised. It is good for the spiritualist to read of Dr. Garretson's experiences in this field; it is good also for him to whom spiritualism is but a farrago of superstition and trickery.

Throughout this book, and "Man and his World," which should be read with this, the author seeks to reach that elevated plane from which all roads may alike be surveyed; all the truths and fragments of truths on which creeds and beliefs are founded, are seen to be but component parts of one unified system. The Trinitarian and the Unitarian, Jew and Gentile, Mahomedan and Pagan, are found to be traveling towards the same goal, by different roads, with various degrees of progression, but all equally walking by the divine light within them, be it but a feeble glimmer, or that effulgent radiance that transfigured the countenance of Jesus.

Dr. Garretson's books commend themselves to all who have learned to doubt

their early religious impressions and remain in a state of indecision, not having yet found firm ground on which to rest their faith; to all who fear death, dread the pains of hell, or who look upon the great Beyond as an appalling mystery; to all who, firm in their present belief, are yet inclined to deny their brethren the right to a different creed; and finally, to all who, striving to develop in themselves that divine principle which we call the Good, can be aided by the wise words of an elder brother in the faith.

NEW STUDIES WITH OLD RESULTS.

DR. ENGELMAN, of St. Louis, recently announced in the *Medical Fortnightly* that he had obtained as results of his recent studies in faradism, among others, the fact that "rapidity of vibration is a hitherto entirely neglected element;" that "interruptions of far greater rapidity than hitherto known, up to 50,000 or 100,000 per minute, secure sedative, not to say anæsthetic, effects hitherto unknown;" and that "all important is the *exact determining* of the number of interruptions used."

Honor to whom honor is due, and we are sure that no one more than Dr. Engelman will be glad to learn that the exact ground he has covered, and the exact conclusions he has reached, were arrived at a year before in the same way by Dr. Hutchinson, of Providence; whose paper entitled "*Electrical Anesthesia*" was pronounced among those read at the meeting of the American Electro-Therapeutical Association, and who has been given full credit for what Dr Engelman claims as results, in Europe and America.

We shall be glad to send an illustrated copy of "*Electrical Anesthesia*" to Dr. Engelman's address at any time.

Society Notes.

REPORT OF A CASE OF DETACHMENT OF THE LIGAMENT OF THE PATELLA. TREATMENT BY SUTURE. RECOVERY.[1]

By WILLIAM BARTON HOPKINS, M.D.,
[Surgeon to the Episcopal Hospital, Philadelphia.]

LAST November a large healthy man, forty-five years of age, was admitted to Episcopal Hospital. He had stumbled and fallen, striking his right knee with great violence upon a cobblestone. Examination of the joint revealed a change of its natural contour. It was flattened anteriorly, and on flexing the leg upon the thigh, the form of the condyles of the femur became clearly exposed, as shown in the illustration.

There was a moderate fluctuation from effusion. The entire patella could be felt and seen drawn well up the thigh. No fragment of bone could be detected above the tuberosity of the tibia. As it was, therefore, evident that the patella had been torn away from its ligament, it was decided to open the knee-joint at once. The patient was etherized, and after preparation of the parts concerned, the seat of injury was laid bare by a longitudinal incision in front of the joint about seven and a half inches in length. Not only was the condition of affairs looked for found, but in addition to the detachment of the ligament from the patella, the whole fibrous covering of the latter was found to have been ripped off and to have remained attached to the ligament. The patella was readily brought down to its natural position between the condyles, and but for its bare anterior surface was found to be intact. Very complete and durable coaptation was effected by the introduction of eight interrupted silkworm-gut sutures at the following points: Three king sutures upon which the greatest reliance could be placed were carried through three small drill holes at the apex of the bone uniting it with the stump of the ligament. The upper margin of the aponeurotic hood was then attached to the fringe-like fibres of the tendon of quadriceps extensor with which it has

[1] Read before the Philadelphia Academy of Surgery.

been continuous, while its lateral margins were sutured through drill holes on either side of the patella. As all of these silkworm sutures passed through either holes drilled in the bone or through a very stout tendon, the approximation of the parts was not only snug but very strong. The points of suturing are shown in the accompanying illustration.

After thoroughly cleansing the knee-joint the long wound was closed, catgut drain being placed in its upper and lower angles. A liberal gauze-dressing was applied, and a long posterior splint retained to the limb. Three days afterward the dressing was removed on account of a slight rise in the patient's temperature, but it was found to be quite dry, except at the points of drainage, where a few drops of blood-stained synovial fluid escaped. The joint was free from redness, fluctuation and pain. In a month the patient was allowed to get into a wheeled chair. The natural contour of the joint was entirely restored.

Five months after the accident he was allowed to begin to flex the knee with considerable force, and it is interesting to observe that almost all the motion he now has, has been acquired within one month. As will be seen, he walks without a limp, and his limb has almost completely regained its strength. The patella is felt to be freely movable, and there appears, therefore, to be no obstacle to the restoration in a short time to the normal function at the joint.

So far as I can learn, sixty-six cases of rupture of the ligamentum patellæ have been reported. This number includes detachments of its upper and lower extremities as well as ruptures in its continuity. Of these I have had an opportunity of referring to fifty-five, including thirteen cases which were collected by Dr. Sands from the records of four hospitals in the city of New York.

In all the cases where treatment was employed some appliance appropriate for fracture of the patella was used with results stated to be fair or good, save three. In two of these the knee-joint was opened and the parted ligament sutured to some fibrous tissue attached to the tuberosity of the tibia, by Sands of New York, and to a similar structure at the apex of the patella by MacFarlane, of Toronto, with excellent results. In both these cases silver wire was used. In the third case operated upon the stump of the ligament and some fibrous tissues at the apex of the patella were scarified long after the occurrence of the injury, but no sutures were used.

Two very remarkable cases are reported by Mr. Shaw, of London, of simultaneous rupture of both ligaments. In one, both ligaments were detached from the apices of the patellæ, while in the other case both parted from their insertions in the tuberosities of the tibiæ.

While, technically, even a very minute fragment of bone remaining in contact with the detached ligament would, if the separation occurred at its patellar extremity, constitute a fracture of the latter, a similar condition at its tibial insertion could hardly be classified, without causing confusion, as a fracture of the tibia. It would, therefore, seem proper to class such an injury as rupture, or, I think better, as detachment of the ligament, if a greater part of its rent surface is tendinous, not bony.

In a very large proportion of cases recorded the lesion was caused by muscular violence. The case now reported I incline to attribute to the combined forces of direct impact and muscular contraction acting simultaneously; the cobblestone forcing the apex of the patella backward, while the tensile strain was applied by the muscles of the thigh. I do not think that the tendinous covering of the bone could have been stripped off by either direct violence or muscular contraction alone. Regarding the advantage in operating at once or at a later period; if opportunity for the former offers, I see no reason for delay, provided there is no severe bruising of the soft parts adjacent, for the inflammatory reaction from the mere rupture is in most cases noticeable slight, and coaptation can be far more satisfactorily effected before, than after adhesions have formed.

As the special feature of this case is the stripping of the bone, it would be of great interest to know if a similar injury had ever happened before, but as its existence could not be revealed except by operation, whether it is unique or not must remain a matter of conject-

ure. While it might have added to the risks of necrosis of the bone from impairing its blood supply had suppuration occurred, it certainly aided materially in securing an approximation well equal to resisting any accidental strain that might be put upon it during the process of repair.

AN OVARIAN TUMOR WEIGHING 111 LBS. REMOVED FROM A CHILD OF 15, WHOSE WEIGHT WAS 68 LBS.[1]

By W. W. KEEN, M. D.

[Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College.]

MISS B., of Benezette, Pa., was first seen by me at Driftwood, Pa., February 26, 1892, at the request of Dr. V. K. Corbett, of Caledonia. She was then fourteen years of age and had never menstruated. About eighteen months before I saw her, her abdomen began to enlarge. Six months afterward Dr. Corbett was consulted for an attack of considerable pain in the left side of the abdomen. He found that she was only voiding eight ounces of urine in the twenty-four hours, but under proper treatment this soon reached a quarter in amount, and has remained so ever since. He never discovered any albumin in the urine. In October, 1891. she had been tapped by a gynecologist, who is said to have diagnosticated a solid and probably malignant tumor, connected most likely with the liver, omentum, and ovary, and who deemed its removal not feasible.

I found the abdomen enormously distended with fluid and advised very strongly that a small incision should be made in the abdominal wall, so that I could determine the relations of the growth with accuracy. Her father, however, was not present, and had made it a condition that nothing beyond tapping should be done. I tapped her immediately and removed considerably over three gallons of amber-colored fluid. When this was evactated I discovered a lobulated tumor on the right side of the abdomen, under the liver and apparently attached to it. It was evidently cystic in part, there being at least two cysts perceptible. Each of these I tapped, obtaining from the upper one a light fluid and from the lower one a much darker fluid. On account of her age no vaginal examination was made. The fluids pointed strongly toward an ovarian cystoma. I again advised an exploratory incision.

April 29, 1883. The patient was finally brought to the Jefferson College Hospital. She has been tapped twice since February, 1892, the last time in February, 1893, when six and a half gallons were drawn off. She is now enormously swollen. The measurements are as follows: From the ensiform to the umbilicus, 16½ inches; from the ensiform to the pubes, 29½ inches (this measurement in myself reaches from the ensiform to the middle of the calf of my leg); circumference, 49 inches. The veins over the abdomen are very large. Nothing can be made out in the interior in consequence of the enormous abdominal distention. Examination of the urine shows no albumin and a very slight trace of sugar(?).

Operation. April 30, 1893. A small incision was made in the median line above the umbilicus, as the greater mass of the tumor lay there. A large trocar was thrust in and evacuated a very large quantity of characteristic opalescent ovarian fluid. The escape of this fluid revealed through the abdominal wall large masses lying especially under the liver and in the right iliac fossa. After this evacuation I enlarged the incision until it measured eventually about eight inches in length. I introduced my hand and found an enormous ovarian cyst, reaching up to the diaphragm and pushing everything out of its way. There were a number of moderate adhesions, chiefly to the belly wall and the omentum. The viscera was fortunately entirely free. The pedicle was only 2½ inches broad. The tumor arose in the right ovary, the left ovary being healthy but small.

The weight of the solid mass removed was twenty-seven pounds, and by actual weighing the fluid removed weighed eighty-four pounds, making a total of 111 pounds. The child herself weighed but sixty-eight pounds.

After the removal of the tumor I never saw so curious a looking abdominal

[1] Read before the Philadelphia Academy of Surgery.

cavity. It looked almost like that of an eviscerated cadaver in the dissecting room. The tumor had so pushed the liver to the right and backward, and the stomach to the left, that nearly the whole of the diaphragm was exposed, and flapped up and down with the pulsations of the heart. Down the middle of the cavity the bodies of the vertebra were entirely exposed, showing the aorta and vena cava to their bifurcations, the intestines being a very minor consideration and pushed to each side in the hollow of the ribs and the lumbar region. When the abdominal wall was sutured the abdomen was excessively scaphoid, the anterior abdominal wall lying directly on the aorta and vertebræ: The puckering of the skin, although moderately marked, was much less than I had expected.

When the operation was completed a glass drainage-tube was inserted, and she was put to bed in very fair condition, in view of the gravity of the operation. The tumor was a multilocular cyst.

May 18, 1893. The child has made an uninterrupted recovery. The drainage-tube was removed on the fifth day, when the discharge had became almost nothing, but three days later a slight rise of temperature took place, and the discharge recommenced. A small rubber drainage-tube was therefore reinserted for a few days. She sat up at the end of two weeks, and will go home as soon as the slight discharge from the drainage opening ceases.

Remarks: I have not had time to search through the literature of ovariatomy, but so far as my memory serves I have never known a larger tumor removed from a child. It weighed just one and a half times as much as the patient. Her recovery has been most satisfactory in spite of a very poor and capricious appetite. The chief lesson the case teaches is the value of an exploratory incision in every case of doubt. Had this been done, instead of a mere tapping, in October, 1891, when the tumor was much smaller, then prognosis would have been much more favorable, and she would have been spared a year and a half of needless suffering. What seemed to be a most formidable operation really proved to be almost a simple one, the adhesions and the pedicle being most favorable for the speedy recovery which has ensued.

The Medical Digest.

FRENCH NOTES.

Translated by E. W. BING, M. D.
Chester, Pa.

Treatment of Gonorrhœal Orchitis, (Dr. Lardier).—Of all treatments for this affection, Diday's method appears the most satisfactory. It consists in swabbing the affected parts with a carbolic solution as follows:

Crystalized carbolic acid 9 grms .	ʒ ii gr. xv
Alcohol, 1 grm	15 gr.

This is to be applied in two or three coats not only over the affected part of the scrotum but also over the course of the spermatic cord. At the end of two or three minutes the parts assume a pearly aspect characteristic of burns by carbolic acid. In a few hours the pain disappears and after three days the patient may go about. In all the cases observed a single cauterization suffices. The objection to the plan is the pain produced; to relieve which iced compresses may be used, or as the author advises, the injection of 8 to 10 cgms. (1 grain to 1½ grains) cocaine, which renders the proceedings painless.

N. B. The injection is to be divided into four or five parts, which are injected at equal intervals over the field of operations.—*La France Medicale.*

—

Tape Worm in Children, (Baumil):—

Oil male fern . . 3 grms	45 grs
Spr. turpentine, Dist. water . . aa 25 grms	ʒ vi
Gum arabic . . . 2 grms	ʒ ss

Take at one dose in equal quantity of milk, and three hours afterwards castor oil ʒ ss.

—

Pneumonectomy.—In the *British Medical Journal* Lawson reports a case of pneumonectomy. The symptoms indicated disease confined to the right apex; the patient was losing ground, but not very ill. She could not afford climatic treatment.

"An incision was made from midsternum along the course of the second rib through the pectoral muscle nearly to the edge of the anterior axillary fold. From the inner end of this I also cut for a

couple of inches downward's along the middle of the sternum. The skin and muscle were then reflected from the surface of the second and third ribs, and a number of vessels spouted and were secured—mainly branches of the acromiothoracic and intercostals. The external intercostal muscles were next separated above and below from the two ribs, and with a periosteal elevator the pleura was detached and stripped off from the inner side. With a fine saw the ribs were divided, through the cartilage internally and through the bone externally near the outer angel of the incision. Pinching up the pleura, I pushed in a trocar, the cannula of which was connected by tubing with a Junker's bottle and bellows, and air, which was passed through a hot strong solution of carbolic acid, was slowly pumped into the pleural cavity. The lung could be partially seen sinking slowly from the chest wall, but no dyspnœa or cyanosis followed. I therefore laid open the external layer of the pleura the length of the external incision, and found the lung completely collapsed and moving up and down rhythmically with the diaphragm.

"There were extensive adhesions along the face of the upper lobe, which took a considerable time to tear through, but gradually, and with patience, a complete separation was effected. There remained high up two finger-like ligamentous processes attaching the apex to the summit of the extension into the neck. These were easily broken and the apex drawn out. The diseased part was seen occupying the anterior part of the apex. I had with me a large needle in handle, rounded, and without edge, and with an eye big enough to take in a large twisted silk thread, which had been boiled, and had long lain soaking in an ethereal solution of iodoform. With this needle I transfixed the lung some distance below the disease, tied firmly in two pieces after the Staffordshire method, and cut off the upper diseased portion. The portion removed was the size of half a fist, and contained a dense turberculous mass with discrete granulations around it. Into the stump iodoform powder was rubbed, the cavity was sponged out, and the mutilated lung dropped back. In the course of the operation I had palpated the whole organ for other collections, but found nothing except soft spongy lung tissue. The ease with which a living lung can be palpated struck me. The fingers seem to almost meet, even when the thickest portions are grasped, nor do they seem so volumnious as in necropsies I closed the external incision without draining. At no time did the respiration get troublesome, so that neither the oxygen nor electric apparatus was wanted The patient was now put to bed and carefully watched. The evening temperature was 99° degrees and pulse 84, respirations 36."

Left-sided pleurisy developed within a week, followed by hemothorax, graduating into empyema. Three months later the girl was improving rapidly but still discharging a little from the empyema.

THE DIAZO REACTION. — Dawson (*Dublin Jour. Med. Sci.*) discusses Ehrlich's test, in the light of numerous experiments, and comes to the following conclusions: 1 The diazo reaction is generally found in typhoid fever, more constantly than in any other except measles and acute phthisis.

2. The reaction cannot be used diagnostically in these three, or against typhus.

3. It may be used to distinguish measles from roetheln.

4. The substance causing the reaction does not give to urine any color, odor, reaction, deposit or specific gravity; nor does it produce albumen, sugar or indican though these are often present also.

5. It is not free acetone; nor is it a product of Eberthi's bacillus.

BRONCHIECTASIS —T. Grainger Stewart (*Brit. Med. Jour.*) recommends this plan of treatment: He injects into the trachea a drachm of a mixture containing guaiacol, 2 parts; menthol, 10 parts, and olive oil, 88 parts. The fetor speedily disappears.

FOR EPISTAXIS, Guenot recommends a five per cent. solution of antipyrin, snuffed or sprayed up the nostrils.

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CASE OF CANCER OF THE HEPATIC FLEXURE OF THE COLON PRODUCING INTESTINAL OBSTRUCTION; TEMPORARY RELIEF BY AN ARTIFICIAL ANUS; LATER RE-ESTABLISHMENT OF THE CONTINUITY OF THE BOWEL BY ILEO-COLOSTOMY BY MEANS OF MURPHY'S BUTTON[1]

BY WILLIAM W. KEEN, M. D.

[Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia.]

MRS. R., of Kansas, was first seen by me with Dr. Ridge and Dr. Lippincott, of Camden, N J., November 22, 1892 She gave the following history: She is fifty-three years of age, and had been in very good health up to about sixteen months ago, when she began to suffer from attacks of abdominal pain, referred to the right hypochondrium, which was colicky in nature, frequently repeated and attended with vomiting. She has had no blood in the stools, nor were the feces diminished in calibre. Occasionally, and especially of late, she has had spells of vomiting, but never of fecal character. During this time she has lost forty to fifty pounds in weight, and her general health has become seriously impaired, especially by the recurring and increasingly severe attacks of pain. Examination of the abdomen showed that it was somewhat distended, and that by manipulation the peristalsis was quite marked, especially in the right iliac fossa. Under manipulation there would be suddenly developed in this region a distinct elastic tumor nearly the size of the fist although more oval in shape, and its development would be attended with great pain, which would be relieved by the audible passage of flatus, apparently through the ileo-cæcal valve. No solid tumor was detectable, but the distension, though not extreme, was such that the absence of such a tumor was not certain. Her bowels were only moved by artificial means.

The diagnosis was that of obstruction, the cause of which was doubtful, but which, in view of her age and loss of weight, and the marked cachexia, was feared to be malignant. A carefully regulated diet with mild purgation by means of a pill of compound extract of colocinth with one gr. of opium every four hours, was decided upon, with additional morphia, if need be, to control the pain.

She was seen again on December 3d. The pills had produced only two moderate stools, and had so increased the pain that they had been abandoned by Dr. Ridge in the interval. The pain was now located not in the hypochondrium, but the right iliac fossa. By December

[1] Read before the Philadelphia Academy of Surgery.

5th the pain, the distention, and the exhaustion had become so extreme that it was evident that something must be done immediately for her relief. Accordingly, as soon as her husband's consent could be obtained (he being in Kansas), it was decided to do an exploratory abdominal section.

December 7th, Operation. Ether. Section in the middle line showed a small amount of serum free in the peritoneal cavity. The intestines were so much distended that even with the abdomen opened it was impossible at any point to find any lesion, though carefully sought for, especially in the right iliac fossa. Moreover, as the ileum approached the colon it became more congested and more distended. A small incision was made in the ileum, and a large amount of flatus and about two or three pints of liquid feces were evacuated. The opening was closed by Cushing's right-angled suture, and another attempt was made to discover the nature of the evident obstruction. It was then very quickly discovered that there were two or three small masses in the colon just above the ileo-cæcal valve, and another still larger and more firm at the hepatic flexure of the colon. The caput coli was so fixed that it could not be brought into view, but there could be no possible doubt, I thought, of the character of, at least, the mass situated at the hepatic flexure, as it was fixed, hard, not doughy. As an ileo-colostomy would have required a second incision, and a considerable length of time, it was deemed best to make an artificial anus, as any prolongation of the operation, in the extremely weak condition of the patient, would almost certainly have resulted in speedy death. Accordingly, the portion of the ileum where the incision had been made was brought into the lower angle of the wound (Maydl's operation), but not opened, and the remainder of the wound was closed with sutures. In order to retain the intestine in the proper place, as no glass bar or other means was at hand, I first thought of passing a pair of hæmostatic forceps under the loop of the bowel through a hole in the mesentery, and retaining it in place by catching the skin at the edge of the wound, but finally concluded to pass a rope of iodoform gauze through the opening in the mesentery, fastening it to the skin on each side with a stitch. This admirably answers the purpose of the bar or pencil employed by Maydl. On the third day the bowel was completely divided down to the gauze by the Paquelin cautery.

She vomited a good deal after the operation. Besides this, and the need for the catheter, she suffered a great deal of pain, requiring first one-half grain, and later one-quarter of a grain of morphia for some days. Moreover, as soon as the bowel was opened, the abundant discharge of feces passed into a genuine diarrhœa for two or three days. Her highest temperature however, was only 100.3° and it reached the normal on the ninth day. After this time she rapidly improved, and gained almost daily in weight and strength, so that she was soon up and about her room.

The discharge from the artificial anus was very liquid, and though from so low a point in the ileum (six inches from her colon); seemed to consist in large part of of a green fluid resembling almost pure bile. In consequence of the excoriation of the skin, she desired, if possible, to be rid of the artificial anus, which I explained to her could be accomplished by means of an intestinal anastomosis. About the middle of January, 1893, her sister came to me and showed me quite a handful of hard, scybalous masses which had passed by the natural anus, and declared her very firm belief that this was the "cancer" I had felt. Taken in connection with her annoyance from the artificial anus, and her desire to be rid of it, I decided upon a second operation, with the full consent of herself and her husband

This I planned as follows: I did not believe that I had mistaken the scybalous masses for a cancer, for it seemed to me that they would not account for the recurring and severe pain for eighteen months, during which time the bowels had been constantly open, nor would they account for the great loss in weight. Still, as it was possible, and I certainly hoped that I might be mistaken (especially as no tumor could even now be detected on palpation of the abdomen), I determined to make an opening at the outer border of the right rectus and establish first the diagnosis. If then no cancer

was present, I would excise the artificial anus and re-establish the continuity of the ileum by an anastomosis. If a cancer were present, and could be removed, I should extirpate it, or if not amenable to radical treatment, I would excise the artificial anus and effect an ileo-colostomy by means of Murphy's buttons, which I had just received a few days previously. Accordingly I proceeded to operate a few days later.

Second operation, January 30, 1893. Having determined to open the abdominal cavity, it was very important, of course, that infection from the escape of fecal matter from the artificial anus should be prevented. I therefore first disinfected the skin all around the artificial anus. While I was doing this several spurts of intestinal contents took place, and I was again very much struck with their resemblance to bile. I then stuffed both ends of the intestine with gauze sufficient to prevent the escape of fecal contents or mucus.

First, I made a vertical incision at the border of the right rectus, and as soon as I could get my fingers into the abdominal cavity I detected, at the hepatic flexure of the colon, the former hard mass, as large as a small orange, and fixed by adhesions so that it could not be drawn out. The smaller masses just above the ileo-cæcal valve were not found, and were probably fecal masses which had escaped, as the scybala referred to. The cancer being, therefore, determined to be present, and also to be irremovable, I closed this wound. Next, I made an incision at the outer border of the left rectus, and, after seizing the sigmoid flexure, passed a bit of iodoform gauze through its mesentery in order to find it quickly. I then passed my fingers under the artificial anus and seized that end of the intestine which led upwards toward the stomach, and in order to prevent the escape of fecal matter, passed a bit of iodoform gauze through its mesentery, and tied it.

Next, I dissected out the artificial anus by means of an elliptical incision. This required a great deal of care, for I found that where the loop of bowel had been drawn out, strong and extensive adhesions had formed between the bowel and the peritoneal surface. Having freed these, I excised the artificial anus, thus making a complete enterectomy. Next, I closed the distal end of the ileum by two rows, of Cushing's right-angled suture, and dropped it into the belly. Into the proximal end I then inserted one-half of Murphy's button (next to the smallest size), and placed the other half in the colon, making a vertical incision for the purpose. I was careful to see that this incision was no larger than was required. The purse-string sutures drew up the serous coat next to the central tube of the two halves of the button very satisfactorily. As, however, at the mesenteric attachment of the ileum there was, of course, no peritoneum, I had some fear that the adhesion might be imperfect at this point. The two halves of the button being now approximated with as much force as I deemed proper, I inspected the margins of the wound all round, and found them apparently perfectly secure. A number of vessels required ligation in a part of the mesentery of the excised loop in which the artificial anus had existed.

The wounds in the belly-wall were now sutured, and a woodwool dressing was applied. The patient stood the operation (which lasted an hour and a half) very well, and was placed in bed in very good condition. I directed that no food whatever should be given by the mouth until hunger required it, and that meantime four enemata of peptonized milk should be administered in the twenty-four hours.

A small amount of morphia, with some atropia, was administered for a few days, and the catheter also had to be used. Her highest temperature was 101.2°, on the day following the operation. On the second day she developed considerable cough, which I confess alarmed me a good deal for the integrity of the anastomosis, but in spite of that fact she had no further trouble. A moderate quantity of sterilized milk was given after forty-eight hours. In the first twenty-four hours she passed a small amount of flatus, and at the end of forty-eight hours there were two liquid movements, amounting to two ounces each. Each one of these was preceded by severe pain. On the third day she had twelve movements, which were liquid, but two teaspoonfuls of paregoric relieved her, in addition to half a grain of morphia, which she took for the

pain. A very large amount of flatus passed during this day. The next day she still had a slight diarrhœa, but after that no further trouble occurred. At the end of ten days all the stitches were out, and on the twelfth day the anastomosis button passed, together with a slough consisting of the rings of tissue between the two paths of the button. Her diet was gradually increased, both in quantity and quality, after the first forty-eight hours.

REMARKS.—I have reported this case alone, although it has been linked in principle with a number of somewhat similar abdominal cases which I have treated in a somewhat similar manner, for two reasons ; (1) Because, it is a rather rare case in the various steps of the operation, and ileo colostomy itself is not commonly required. (2) On account of its being the first use (except as recorded in the author's paper,[1] I believe) of the metal anastomosis button of Dr. J. B. Murphy, of Chicago. It is also the first case in which the button has been used for ileo-colostomy. Murphy has recorded three cholecyst-enterostomies and four gastro-enterostomies in the human subject. All were completely successful. No other procedure than the establishment of an artificial anus and the latter anastomosis, I think would have been justifiable in this case. Her condition was such when I did the first operation, that had I attempted anastomosis by any of the methods then in use, the prolongation of the operation, I am quite sure, would have cost her her life. Immediate anastomosis was carefully considered at that time, but we did not deem it a wise procedure. Had I then had Dr. Murphy's buttons I could have done the anastomosis so quickly that I think it would have been perfectly feasible, but his paper was not published until three days after the first operation was done.

The duration of the second operation was considerable, as the dissection of the artificial anus was very tedious, on account of the widespread adhesions. Although these adhesions were a serious difficulty in the second operation, they have given me a confidence in the security of Maydl's operation for artificial anus, which is not without satisfaction.

[1] N. Y. Medical Record, December 10, 1892.

As soon as I had made a diagnosis, I closed the right lateral wound, which required, of course, but a very few minutes. It may be asked why not make a median incision above the umbilicus, both for the purpose of making the diagnosis and of doing immediately an ileo-colostomy in the transverse colon, instead of making three incisions. I think this would not have been advisable for the following reasons : The ileo-cæcal valve was so apparently the focus of the attacks of pain prior to the first operation that I thought it possible the obstruction might be at any point in the ascending colon, and an incision in the median line above the umbilicus, unless it were so large as to admit the hand, would not have given me access to the entire ascending colon nearly so well as the lateral opening ; and again, in case I had found by the right lateral opening that the malignant tumor could be removed, I should have proceeded to excise it at once. This could not have been done, of course, nearly so well through a median incision as through a lateral one, on account of the adhesions. In fact, now that I have made two incisions on several occasions in abdominal operations, I feel that multiplicity of incisions is not a matter of very great moment. Ready access to the focus of disease is far more important than whether there shall be one, two, or, as in this case, even three incisions in the abdominal wall. The danger of hernia is, of course, increased, but with proper suturing of the abdominal wall, and subsequent proper care after the operation, the danger of ventral hernia is not great.

Secondly, the use of Murphy's metal button. The button of Dr. Murphy consists of two cup-shaped disks or bowls, from the middle of which protrudes a hollow cylinder. This cylinder in one bowl has a thread on its internal surface. The cylinder of the other half is pushed within the cylinder which has the thread on it. It could easily be withdrawn after being pushed home but for the fact that through two openings in the side of the male cylinder project two teeth which catch on the thread of the screw, and practically make the two parts of the male and female screw.

In this manner, once the two parts of

the button have been pressed together, they can only be detached by the rotary motion of unscrewing, but they are screwed up by simply pressing them together. After being pressed together, the two layers of intestine would shrink by loss of their fluids, and might allow a leakage. To prevent this the rim of one-half of the button is pressed upward by a spring, which thus keeps the two layers of intestine in contact as they shrink, and insures complete sloughing of the tissues between the edges of the two parts of the button.

It is certainly a most happy mechanical invention, especially the method of fastening it by what is practically a secure screw, and yet instead of being rotated in order to fasten it, it simply needs to be pushed home. The two projecting teeth, which answer the purpose of the thread of the male screw, make it one of the most ingenious devices I have ever seen. I confess I used it with some hesitation: as one always does a new instrument.

I especially feared trouble at the mesenteric attachment of the bowel, where, however, I used the utmost care to see that its edges were well tucked in. In order to accomplish this, I think it very important that the free ends of the drawing string should emerge at some other point in the circumference of the bowel than near the mesenteric attachment. In applying the drawing string I did not use the two strings recommended by Murphy, but used only one, the ends of which emerged opposite to the mesenteric attachment.

Two objections have occurred to me as to the use of the button, to one of which I do not attribute much importance, although it has some. The other, however, may be a serious objection. The first is whether such a large mass will always readily pass the ileo-cæcal valve. We all know, on the one hand, that a considerable number of cases have been reported in which the plates of artificial dentures with several teeth attached have been swallowed, have passed the ileo-cæcal valve and have been voided without difficulty. But certainly a much larger number of cases of intestinal obstruction from gall-stones have been reported. Pouzet[1] has collected twenty-seven operations for such obstructing gall-stones, to say nothing of the cases which have died without operation. Gall-stones are less irregular than the artificial dentures and more nearly approximate in shape and size to the Murphy buttons, and yet are capable of producing serious and even fatal intestinal obstruction. On the whole, however, I do not feel that this objection is a very serious one, since the condition requiring the use of the buttons, if they be used, is one which must dominate all other risks. Fortunately, in the particular case here reported, the anastomosis was below the site of the ileo-cæcal valve, and I had nothing to fear, therefore, from such an obstruction. Moreover, in the seven cases so far reported by Murphy, no such difficulty was encountered, though it was uncertain in at least one case whether the button had ever escaped. It is curious to note that in one of his cholecyst-enterostomies gall-stones of the same size as the button escaped on the eighth day, while the button was not passed till the eighteenth day.

The second objection is more serious. If the button be used in a gastro-enterostomy I do not see that there is any factor which will absolutely determine which way the button will go when it has become loose. The natural current of peristalsis, or of the food would of course, tend to take it from the stomach into the bowel and carry it toward the rectum, but I can readily conceive it possible that the button might fall backward into the stomach, especially in the recumbent position, and if the stomach were not in active peristalsis, forcing the food into the intestine at the moment when the button became loose ; and such a foreign body in the stomach might prove a serious source of danger. So, too, in case of lateral anastomosis of the bowel, the button, instead of passing on, might slip into the cul-de-sac between the new growth and the anastomotic opening and there create a similar danger. Both of these possibilities are theoretical, and until the method has been repeatedly tried we cannot be sure that they have any weight, but they should certainly be considered.

[1] Archiv. Provinc. de Chir. August, 1892.

That the button is not only ingenious, but in not a few cases will prove very useful, I have no doubt. The speed and certainty with which an anastomosis can be made, once that the bowel is prepared for it, are certainly advantages which the button possesses over all other means of anastomosis, whether by simple suturing or by bone plates, catgut or other rings, Murphy states that he has completed the operation in from eleven to twenty-one minutes. The question of speed in such abdominal operations is of the utmost importance, and this device is by far the quickest of all means of anastomosis. It will be observed that I did not put any re-enforcing Lembert or other sutures around the intestine after I had clamped the button. I was so well satisfied with the security of the button that I was perfectly content to let it go without any additional sutures. Care will always have to be used to see that the silk for the drawing string is moderately stout, although not clumsy, and that in drawing it tight it is done evenly and carefully, but more especially, in clamping the two halves the greatest care must be exercised to do it gently, to see that no part of the bowel escapes the grip of the rings, and that then the two halves are driven completely home, in order to secure eventually sloughing of all the portions of the intestinal walls included between them.

POSTSCRIPT.

Post-Mortem Examination.—After the above paper was in type the patient died very suddenly on March 18th. The cause of death was an ulcer in the ascending colon, followed by sudden perforation and death in 10 hours. She was unusually well on the 17th, and slept excellently until 5 o'clock on the morning of the 18th, when she was suddenly awakened by agonizing pain. By noon she was in collapse, and died at 3.30 in the afternoon. I was not aware of her illness until after her death.

The post-mortem examination was made by Dr. Lippincott on the 20th. He found a universal peritonitis, and surrounding the ascending colon a great many dense adhesions. He intended to take out the entire colon from the ileocæcal valve to the rectum, but by an unfortunate accident only removed the ascending and descending colon with parts of the ileum. The error doubtless arose from his removing first the decending colon, thus destroying the continuity of the large bowel.

(1) The point of anastomosis is of great interest. From the outside one would almost think that it was a normal termination of the ileum in the colon. On cutting a window into the colon the point of anastomosis is seen to be a perfectly circular aperture No more perfect union could be imagined. It measures one-half inch in diameter. The size of the button by which the opening was made is 1 inch in diameter, showing that *in the 47 days since the operation the aperture had contracted to one-half of its original diameter.* The entire colon at the point where the anastomosis was made is narrowed to 1 inch in diameter, the diameter of the colon toward the splenic flexure being 1⅞ inches, and at the lower (rectal) end 2½ inches.

The contraction of the anastomotic opening, it seems to me, is an extremely important point; in fact, the pivotal point, upon which rests the utility of the button. It suggests the query whether the contraction would not have gone on until it practically would have rendered the anastomosis fruitless, thus fulfilling the fear expressed by Dawbarn[1]. Whether end-to-end anastomosis in the small bowel would be followed by similar contraction is an open question, but it certainly seems that in a lateral implantation the buttons would not be as useful as the ordinary anastomosis with large openings. I should suspect, also, that in a case of gastro enterostomy the contraction would be a very serious matter after a time and might make the operation of no avail. If, also, the button should drop back into the stomach, or into the proximal cul-de-sac of the bowel in a lateral anastomosis, it would never be able to escape through the constantly narrowing orifice. This is, I believe, the first post mortem recorded after the use of the button, and it has convinced me that the button should be abandoned for intestinal or gastro-intestinal anastomosis. The opinion expressed in the earlier part of this paper

[1] Annals of Surgery, February, 1893, p. 155.

as to the ingenuity displayed in the construction of the button is no way changed, but the favorable opinion as to its usefulness I think must be modified. It will find, however, a most useful field in cholecyst-enterostomy, where only bile and no solid matter has to pass through the opening, and the contraction would not be an obstacle to permanent success.

(2) The specimen of the ileum and ascending colon consists of a portion of the ileum four and one-half inches long and of the colon four and one-half inches long, measuring from the ileo-cæcal valve. Directly through the anterior longitudinal band, just above the level of the ileo-cæcal valve, is a perforation which is now one and one-eighth inches in diameter, but which was originally, Dr. Lippincott tells me, considerably smaller. It was torn during the manipulation of removal. The perforation resulted from a solitary ulcer, and was the cause of the fatal peritonitis. The whole of the walls of the ileum and colon are thickened, so that they are almost as thick as sole leather, and are very stiff. This thickening is most marked about the ileo-cæcal valve and the caput coli. In fact, opposite the junction of the ileum and colon the wall of the cæcum is nearly half an inch thick. The opening of the ileo cæcal valve is greatly narrowed, and is so small that it will not admit the tip of my little finger. In the caput coli was found a small fragment of quartz, one-fourth of an inch long, which had done no apparent harm. The appendix is normal, has a length of two and one-half inches, and is free. The portion of the colon removed is greatly pouched. The closure of the free end of the ileum at the time of the second operation is perfect.

Dr. D. Braden Kyle made the microscopial examination and submitted the specimens to Profs. Longstreth and Coplin, who confirmed his opinion. He reports as follows: "Sections were made from the border of the ulcer, from the upper end of the colon, and at the free end of the ileum. No evidence of malignant growth could be found. The tissues were all chronically inflamed and somewhat softened, the process involving all the layers of the intestine, but showing no definite structure. The embryonic cells, it is true, resembled the embryonic connective tissue cells of sarcoma, but from their general appearance I would conclude that they were only 'indifferent' cells, of inflammatory origin. I was decidedly inclined to think that the body had been injected with chloride of zinc before the autopsy, but Dr. Lippincott states that this was not the case. The reason for this suspicion was that under low power there were seen at certain points masses which resembled nests of cells, but which higher powers showed not to consist of cells at all, but looked like material that had been injected into the tissues. The odor of the specimen also resembled the odor of intestinal specimens from zinc subjects in the dissecting room."

(3) The question of diagnosis is an important one. Unfortunately, the post morten does not entirely clear this up. The omission to remove the transverse colon leaves in doubt the character of the mass which Dr. W. J. Taylor, Dr. J. Chalmers Da Costa, and I felt there at both the first and second operations. Whether it was really a carcinomatous nodule, or whether it was a fecal mass in one of the thickened pouches of the colon, or possibly an enlarged gland adherent to the colon, must remain in doubt. The microscopical examination of the colon, by Dr. Kyle, would seem to make it unlikely that the growth was malignant and from palpation of the specimen one can see very easily how, even without any concretion, the thickened pouches of the colon might be deemed to be malignant, and that any moderate sized fecal mass especially if it were hard and pocketed in one of these pouches, and thus comparatively immovable in relation to the gut, might easily be mistaken for a carcinomatous mass. But I am by no means clear that this simple explanation is the true one. I received the specimen just as I was correcting the proof of the first part of this paper, and had, therefore, an opportunity to change the title of the paper, but I preferred to let it stand as I had first written it, "Cancer of the Colon," partly because there is really a doubt as to whether it might not have been cancer, but especially to call attention to the condition of the colon, which, if not malignant, might easily be

mistaken for such a condition, and which certainly required the same treatment as obstruction from malignant disease. If not malignant, the disease, so far as the microscope shows, seems to have been a chronic ileo-colitis, with its focus at the ileo-cæcal valve, extending upward in the colon to an uncertain distance and also some distance in the ileum. This had produced enormous thickening and great pouching of the walls of the colon, and had bound it down by extensive adhesions so that it could not be brought into the median wound at the first operation, and to a great extent had obliterated the opening of the ileo cæcal valve. Both the condition of the colon and that of the ileo-cæcal valve would produce intestinal obstruction mechanically, and to this is to be added the interference with the normal peristalsis, both by the thickening of the walls of the colon and by the adhesions. The formation of the temporary artificial anus and the later ileo-colostomy seem to me, therefore, the only possible rational treatment.

DISCUSSION.

Dr. John B. Deaver: It was my fortune to see this lady in consultation. One evening I received an urgent call from Dr. Ridge, of Camden, asking me to see the case. Dr. Price had been sent for, but as he was unable to go, he referred the case to me. I saw the lady, and thought that she was about developing an attack of intestinal obstruction. I was told that she had had a previous attack. The abdomen was considerably distended, but I had no difficulty in convincing myself that she had malignant disease. I suggested that we practice intubation of the colon, which was done. I threw four quarts of water into her colon, and clearly demonstrated that the fluid was largely arrested at the hepatic flexure. I believed that she had a growth in the neighborhood of the ileo-cæcal region and that it involved the ascending colon. The question of operative interference came up, but as the case was not urgent, I left that for Dr. Price to determine.

There is often a great difference between the clinical aspects of a case and the results of microscopical examination. While I have due respect for the pathologists, I know that they are not always able to tell whether or not a growth is malignant, or to draw the line between carcinoma and sarcoma. I, therefore, do not rely wholly upon the microscope.

I have had no experience with Murphy's button. I have done a number of anastomoses, having used the segmented rubber rings and in one instance Senn's plates. The objection urged against anastomosis with any form of appliance is the contraction which follows. The longest case after operation that I have is one of ileo colostomy done nine months ago. A one and a half inch opening was made and the segmented rubber ring employed. The Abbè operation seems to be less open to this objection.

In inguinal or lumbar colotomy where the case has not been urgent, I have been in the habit of anchoring the bowel for two or three days before opening. The glass rod is a simple means of keeping the bowel in place, the objection to it being in danger of distension and prolapse of the bowel. This has occurred in the practice of very good surgeons.

Dr. William J. Taylor: I assisted Dr. Keen in this operation, and had an opportunity to feel this mass, which, in spite of the results of the post-mortem, I persist in thinking a malignant growth of the hepatic flexure of the colon. The character of the growth was not that of a scybalous mass. It was very fixed and surrounded by dense adhesions. In my opinion the specimen represents that portion of the colon up to this mass where it was densely adherent.

I wish to say in regard to Maydl's operation that I performed it last October on a man with cancer of the rectum. The case was a bad one for operative interference. The operation was a colostomy, and had to be done very quickly, for when the man was put on the table he stopped breathing, and two men were making artificial respiration while I was operating. The whole operation was completed in at most ten minutes. The man recovered well from the effects of the ether. I left the bowel too long before opening it, which I did with the Paquelin cautery on the sixth day. A large quantity of feces escaped. The

man to-day is in a very fair condition and gaining in flesh.

Dr. James M. Barton: In making an artificial anus in connection with the small bowel, the more I make, the less precautions I use. I simply pull up a loop of the bowel and put in one or two stitches to keep the peritoneal membrane in contact, and the following day open the bowel with scissors and put on hæmostats if hemorrhage occurs. They are permitted to remain on twenty-four hours.

Dr. Keen: Personally I am in a good deal of doubt whether this was malignant or not. I certainly believed that it was at the time. A malignant growth is usually not so extensive as this is. One great advantage of Maydl's operation is its rapidity. It can be completed in ten minutes from the first incision. In the last operation I opened the bowel six hours later, and at that time the adhesions were firm.

OVARIOTOMY ON PATIENTS OVER SEVENTY, BY AMERICAN OPERATORS.[1]

By MARY SHERWOOD, M. D.
Baltimore, Md.

IN a report of five cases of laparotomy on patients over seventy years old, published in the *Lancet*, January 21, 1893, J. Rutherford Morison states: "Long lists of successful ovariotomies can no longer serve any good purpose, for it has been proved that the mortality of ovariotomy should not exceed five per cent. My excuse for publishing the following cases is the advanced age of the patients. Sir G. M. Humphry long since pointed out that in old people repair and recovery are likely enough to follow major operations. This is true of abdominal sections—a fact not sufficiently recognized." That this last statement is emphasized by facts is shown most conclusively by the statistics in a list of 100 cases of ovariotomy performed on patients over seventy years of age, which I have recently assisted Dr. Howard A. Kelly in collecting. While a complete tabulated statement of these cases, with an analysis of the same and inferences drawn therefrom, is reserved for publication in the *Johns Hopkins Hospital Reports*, at the suggestion of Dr. Kelly I have taken the cases reported by American operators as the basis of the present paper.

That special attention might be called to the cases of American surgeons seems appropriate as this list includes: 1. The earliest case found in the literature on the subject; 2. The oldest case on which ovariotomy has been successfully performed; 3. The greatest number of cases reported by any single operator.

The first ovariotomy on record as having been performed on a woman over seventy years old, was the case of E. P. and Wm. C. Bennett, of Danbury, Conn., who, on the 17th of August, 1861, operated on a patient aged seventy-five years. An incision two inches long was made and seven or eight sacs emptied with a trocar. Silver sutures were used in closing the abdomen. The patient "recovered without any mishap."

To Dr. John Homans, of Boston, belongs the honor of having operated on the oldest case on record. In the *Boston Medical and Surgical Journal*, May, 1888, he reports a case of ovariotomy in a patient aged eighty-two years and four months. He removed a multilocular cyst of the left ovary, weighing fifteen pounds, and in December, 1892—four years after operation—reports the patient as alive and well. In addition to having operated on the oldest case recorded, Dr. Homans reports twelve cases of ovariotomy in women over seventy years of age, the greatest number accredited to any single operator.

The table included in this paper contains thirty-eight cases from the original list. Of this number, thirty-three recovered from the operation, five died, giving a mortality of 13.1 per cent. The mortality as based on the complete list of 100 cases is less than this (twelve per cent.), The results of the operation are, therefore, very encouraging when one considers that, according to Bland Sutton, in experienced hands the mortality of ordinary ovariotomy varies from five to ten per cent. This rate of mortality becomes increasingly suggestive when it is noted that in the series only nine cases are reported as simple and uncomplicated. In twenty-three cases adhesions were

[1] Read by invitation of the Board of Directors before the Philadelphia County Medical Society, May 24, 1893.

more or less numerous, necessitating in two cases the removal of the uterus. In this connection the table seems to establish the fact that age itself need not be considered as an additional factor in the prognosis of ovariotomy. In the case of Boldt, the patient was seventy-four years old, cachectic, and much emaciated, with moderate ascites. The entire tumor was firmly adherent, many adhesions so dense as to require severing with scissors or knife; there were also adhesions with intestines. The retro-peritoneal glands were enucleated. The tumor proved to be a multilocular cyst of the left ovary of which the lower and posterior portions as well as the enucleated glands were carcinomatous. This operation was performed in March, 1887, and Dr. Boldt reports the patient as still living—nearly six years after operation. In one of Homan's cases the tumor was so adherent to the uterus that the body of the uterus had to be removed also. The case was that of a woman, aged seventy-two, from whom Dr. Homans had removed the right ovary five years previously, who had remarried after recovery from this operation, and from whom he now (1877) removed a multilocular cyst of the left ovary together with the uterus. In December, 1892, he reports the patient as living and well. In June, 1890, Dr. H. Marion Sims operated on a patient aged seventy years, removing a multilocular cyst of the right ovary, weighing eight pounds, adhesions being so extensive that he was obliged to remove the uterus also, and the patient recovered and is reported as still living in January, 1893.

As the nature of the tumor is an important factor in estimating the results of the operation, and examination of the table shows that the most frequently occurring tumor is the multilocular cyst. Unfortunately, in a majority of the cases there is no histological report of the nature of the tumor extirpated. In one instance—a case of Dr. Kelly's—a careful microscopical examination showed areas of adeno carcinoma in the cyst wall; another cyst was cancerous at base with involvement of the retro-peritoneal glands, while two of the multilocular cysts are reported as papillomatous; sarcoma, dermoid, solid tumor are noted once respectively, and in seven instances the cyst is unilocular. The absence of results of microscopical examination in some cases makes it impossible to reach any accurate decision as to the percentage of malignancy, although in seven instances the tumor is stated to be non-malignant.

With regard to the ovary affected, we have the statement in twenty-seven cases, in ten of which the tumor was of the right ovary, while in seventeen the left was affected. It is interesting to note that in our list of 100 cases, seventy-two of which report on this point, the right ovary is involved in thirty-eight, the leftin thirty-two csses (in two cases both ovaries being affected). No evidence is, therefore, afforded that either ovary is the more frequent seat of disease.

The time of first appearance of symptoms in the majority of our cases shows that the tumors were for the most part rapidly growing, in six instances the observation being made less than one year before operation, while in nineteen the time was between one and two years. The remaining six cases which report on this point give a time varying from three to ten years.

The subsequent history of these cases is a point of great interest, and here, too, the facts of our table give definite information in many instances. As was stated above, five patients died within ten days after operation. Of eight cases reported as dying subsequently, four lived less than a year, while four others lived from five to ten years after operation. The cause of death in these eight cases is variously given — pneumonia, heart disease, old age, etc.

Eighteen patients recovered from the operation and are reported as living at present, *i. e.*, in January, 1893, when the facts for the table were collected. In two cases only was this report given less than a year after operation. Nine patients were alive and well one to three years after, and seven have survived operation and are still living from three to ten years after. Evidently we can draw no conclusion from the after-history of the patients against the advisability of operating on the aged, in the face of the fact that sixteen of these thirty-eight patients lived from two to ten years after

the operation was performed, twelve of this number being alive at present.

The facts shown by our statistics summarized briefly are:

First. That the operation of ovariotomy in the aged presents no essential differences from this operation in cases of younger years.

Second. That the percentage of recovery from this operation in patients over seventy, as shown by the results of American surgeons, is eighty-six and eight-tenths per cent., the mortality thirteen and one tenth per cent.

Third. That the indications and contra-indications for ovariotomy in the aged are essentially the same as for this operation in general.

DISCUSSION.

Dr. B. F. Baer: My experience agrees very closely with that presented in the paper. I have operated on four women over seventy years of age, and if I might go back one or two years more, I could add two other cases, the ages of the six ranging between sixty-eight and seventy-six years. Of this number one died. The oldest patiet was operated on two years ago, and is living and well at present. The case was one of monocyst with dermoid elements, and the patient made a more rapid recovery than did my youngest ovariotomy, a girl sixteen years of age.

The patient that died was seventy-three years of age. I was induced to operate at her urgent request long after the time had passed when operation should have been done. The tumor was known to have existed twenty-five years and she had repeatedly refused operation. She died ten days after the operation, but I believe no sooner than she would have done without operation.

A year ago I performed hysterectomy in a woman seventy-one years of age for pyometria, the cavity of the uterus being converted into a pus sac as large as the fœtal head. After a prolonged operation and the separation of many adhesions the mass was removed, and the patient recovered.

Dr. Anna M. Fullerton: Having looked up rather hastily the cases of abdominal section which have been under my charge since my connection with the Woman's Hospital, I desire to present a few data in connection with these cases, with the hope of emphasizing some of the points so ably set forth in Dr. Sherwood's paper. Among about 250 cases of section done for pelvic disease, I find forty-one for large cystic ovarian tumors. The oldest patient operated upon was sixty nine years of age, the youngest seventeen years of age. The statistics as to age are as follows: Three cases between the ages of sixty and seventy; five cases between the ages of fifty and sixty; eight cases between the ages of forty and fifty; fourteen cases between the ages of thirty and forty; nine cases between the ages of twenty and thirty; two cases under the age of twenty.

If we hold the generally accepted theory of Waldeyer, that all ovarian cysts are congenital, and as a rule remain stationary until some exciting cause shall stimulate their development, these statistics are of value as confirming the opinion that the period more especially favorable to their development is that of the greatest sexual activity. Thus thirty-one of the forty-one cases were married women. All causes of pelvic congestion would seem, however, to be a factor in their development. A large majority of the cases operated upon in the hospital were working women who were obliged to spend much of their time on their feet. This was the case with the three cases over sixty years of age just reported.

The greater number of tumors in Dr. Sherwood's list appear to have been multilocular cysts. Waldeyer believes that all unilocular cysts have been multilocular in the beginning. The question as to the malignancy or non-malignancy of certain forms of these tumors, particularly those associated with the existence of papillary growths, has been a mooted point with surgeons.

The exact period when a benign tumor becomes malignant and the causative factors in producing such transformation are still subjects of doubt. A tumor which has long been quiescent and suddenly and rapidly develops within a few months is suggestive of this transformation. However, even this supposition should not preclude the idea of operation. Some of the most remarkable cases of peritoneal metastasis have been reported,

in which papillar excrescences have been found scattered over intestines, parietal peritoneum, etc., in which cure has been effected after the removal of the tumor. Pozzi reports such a case in which he operated and where there had been no return for eleven years. Out of 638 ovarian cysts removed by Schroder, one hnndred have been reported as having degenerated into malignant tumors. This gives us 16 per cent. as malignant. I believe, therefore, that as soon as an ovarian cyst is recognized it should be operated upon. Not only is the operation, as a rule, much simpler, but the patient is saved from many dangers attendant upon the presence of such a tumor.

Age should not be a contra-indication against operative procedure. Quite young children have been successfully operated upon. Roehmer is said to have successfully operated upon a child only twenty months old. Several cases have been treated by operation between the ages of seven and thirteen. On the other hand extreme old age has proven no obstacle to a successful issue, as shown by the list presented here to-night by Dr. Sherwood. In our experience these older patients seem much less prone to peritoneal inflammation than younger patients It has always to be remembered, however, that they are more liable to hypostatic pulmonary congestion and the occurrence of bed-sores. Therefore it is desirable to get them out of bed as soon as possible. The three cases referred to in my list, as above the age of sixty years, all made a good recovery.

Dr. George E. Shoemaker: The oldest patient upon whom I have done an ovariotomy was fifty-two years. She recovered. A considerable experience in the treatment of the aged has led me to believe that if we can avoid the dangers of shock and of after confinement to bed, with the dangers which follow from pressure, the aged are able to bear a considerable amount of traumatism. Their wounds heal readily in the absence of diseases which interfere with the healing of wounds at other ages. Their fractures unite well. I can recall, in my own practice, a hernia operation at eighty-two years, a fracture of the sternum at seventy years, a dislocation of the shoulder with useful joint at seventy-eight years, severe obstruction of the bowel at more than eighty years of age, all of which cases recovered. While not strictly germain to the subject, these cases indicate the amount of injury or disease from which the aged may recover. They bear shock badly, but with the modern methods of surgery which secure rapidity and thoroughness of operation, with little loss of blood, we are encouraged to submit the aged to a greater amount of operative interference than formerly would have been considered wise.

Dr. John B. Roberts: The results given in the interesting paper of Dr. Sherwood do not surprise me, for those who do much operative work must have come to the feeling that age in years is not a criterion of the condition of health. In other words, some of the patients that we operate on at thirty are older in tissue than others operated on at sixty. Take the operation for cataract, which is done on tissues without ordinary blood-vessels, yet, with proper precautions, there is no disastrous effect to the eye or individual, although the disease is pre-eminently one of old age. I have knowledge of a patient between ninety and one hundred years, in whom extraction was done years ago before the days of asepsis, and the patient recovered without trouble and with good vision. I recall another case where I assisted in the removal of a large fungous malignant tumor of the breast in a very old woman and good recovery followed. The paper, while interesting, only enforces what we have all come to believe to be the fact, that it is not the actual age in years, but the condition of the tissues in which we make the incision. It is a common thing for patients to be told that they are too old to be operated upon, but I believe that a patient is never too old to be made comfortable.

Dr. Sherwood, of Baltimore, Md.: I was glad to hear the report of Dr. Baer, for our list up to date contained no case by a Philadelphia surgeon.

With reference to the nature of the tumor there is one point which should be emphasized; that is, that the evidence of malignancy can be determined only by microscopial examination of the tumor. This is brought out distinctly by one case in which the clinical history gave no evi-

dence of malignant disease, yet on examination the tumor was found to contain areas of adeno-carcinoma. It is impossible for us to determine the proportion of malignancy. The list contains the report of three cases of malignant tumor to which may be added two that are spoken of as papillomatous. We may say, however, that so far as clinical observation and microscopial examination go, the proportion of malignancy in these cases is not greater than in the same number of cases in general. I think that this differs somewhat from the ordinarily accepted opinion, which is, that there is a greater tendency to malignancy in the aged than in earlier years.

In reference to the remarks of Dr. Roberts, I would say, that in the majority of cases in our list there were evidences of senility and marasmus, the marasmus probably being due to the presence of the tumor, and, therefore, an indication for operation rather than a contra-indication, which senile marasmus is considered to be. The fact that a number of cases were operated on in the presence of heart disease and a high degree of arterio-sclerosis, shows that even under these conditions, the aged patient may recover from a serious operation.

News and Miscellany.

Currier recommends oxygen inhalation in the treatment of septicemia; believing that impending death may be thereby averted.

Dr. Emmet has republished from the *N. Y. Journal of Gynæcology and Obstetrics*, his "Reminiscences of the Founders of the Woman's Hospital Association." It contains portraits of Marion Sims, Valentine Mott, and a number of others identified with the Association.

We regret to learn that Dr. S. V. Clevenger has been compelled to take a short furlough from the Kankakee Asylum, as he is suffering from the effects of overwork. The man who undertakes to superintend the care of 2100 insane, and throws himself into the work with enthusiasm, is apt to suffer from over-work soon.

Frederick Stearns & Co. have issued a pamphlet upon the uses of "Wine of Cod Liver Oil with Peptonate of Iron." This preparation is said to contain all the active principles of cod liver oil, except the fat.

Japan has granted 15,000 yen yearly for a laboratory for the study of infectious diseases, under Dr. Kitasato. The citizens, however, oppose its location in their vicinity, from fear of contagion and depreciation of values.

Dr. R. Harvey Reed the Guest of The New York Medico-Legal Society.—Dr. R. Harvey Reed, of Mansfield, Ohio, the well-known treasurer and one of the founders of the National Association of Railway Surgeons, was the recent guest of the New York Medico-Legal Society.

This Society held its meeting in the parlors of the Hotel Imperial, at 8 P. M., June 14th, and was presided over by Judge C. P. Dailey, of Brooklyn.

Dr. Reed was introduced by the Hon. Clark Bell, of New York, who spoke at considerable length of the herculean task of organizing the entire system of railway surgeons of the United States, Canada and Mexico, of which Dr. Reed was an active, if not the leading pioneer.

Dr. Reed presented the paper of the evening, which considered in full an extended review of the importance and practical value of a railway surgical service in all large railway systems.

Dr. Reed discussed the subject from a consideration of its value, first: To the employe on the railroad, and the traveling public; second: By its importance from a financial stand, to the management and stockholders of a large corporation, and third: By the advantage to general surgery by specially studying and treating this class of injuries, as belonging to a special group.

The day following, Dr. Reed visited the Harlem Hospital, where he saw several interesting cases of traumatic lesions, and two osteoplastic operations for fractured K. O., and a spattered fracture of the tibia from railway accident. In the evening he was entertained at dinner by Dr. Thomas H. Manley, leaving for home the following day.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
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THE PRESENT STATUS OF THE TREATMENT OF UTERINE FIBROIDS.

WHAT shall be the treatment of uterine fibroids in these days of advanced surgical science would seem an absurd question; yet withal it is one which is by no means settled.

Verneuil recently stated that a uterine fibroid, that gave no pain and interfered with no organic function, should be left undisturbed. That is precisely our position. To interfere here is to do a needless mutilation.

But, unhappily, there is a considerable number, perhaps the majority, in which that growth is steady; and their presence is attended with distressing symptoms, local and general. Here appropriate interference is often salutary and necessary.

What shall be the character of our relief measures?

We can answer this question only by an intimate and exact knowledge of the anatomo-pathological composition and situation of the neoplasm.

In Doyen's recent and valuable contribution, though profuse in illustrations of the various types of uterine myomata, when discussing surgical methods for their relief or cure he considers only one fundamental procedure for their relief, and in this respect is in accord with the views of many modern operators.

His advice and practice are extremely radical, *viz.:* to amputate the uterus, ovaries and tubes, to do a hysterectomy either abdominal or vaginal in all fibroids.

But a considerable number of fibroids, whether submucous or subserous, are nodular masses, both sessile and pedunculated. Now, when these occupy the endometrium and pack the uterine cavity, by wide cervical dilation and ergotic contraction of the muscle their enucleation complete, radical and permanent, is alike a simple and always safe procedure, devoid of the dangers inherent in a hysterectomy, and always leaves the patient a whole woman for child-bearing or other physiological purposes.

When these fibrous masses are subserous and are not deeply incorporated in the interstitial tissue of the uterus, they may be readily decorticated by the fingers introduced through the abdominal incision, and rolled out, one after the other, until the entire group is cleaned out.

Let us hear more from the brethren on this subject of enucleation, for, without question, it is a fruitful theme; and when more generally understood will often render the performance of these capital operations on women a rare necessity.

T. H. M.

Annotations.

VELOCIPEDOMANIA.

SUCH is the title of a recent contribution in one of our French exchanges.

The velocipede, the bi- or tricycle, says the author, is the infernal pegasus which exercises a despotic reign in our time. Our author is bitter in his denunciation of the machine, as a motor for

females. Their dress, their motions, and attitudes, he adds, may be hygienic, but they are indecent. Distorted chests, deformed, curved spines, and displaced uteri are some of the penalties, in young growing girls. Sudden transitions of temperature, from free perspiration to chilling draughts, with attendant bronchitis, pneumonia, and neuralgias, dangerous falls, with consecutive fractures, hæmorrhages, orchitis, diverse hernias, as umbilical, crural, incarcerated or strangulated, truly redoubtable conditions may ensue.

Simple urethritis, inflammation of the urethra, he alleges, is common with the bicycle apprentice, badly mounted or wanting in a mastery over his machine. Arthritis of the bicyclist has been described by Dr. Lavieille, with contracture of the peroneus longus, from overstrain of the muscle. It leaves a species of talipes valgus, and produces a painful lameness, slow to be recovered from. It is advised not to permit bicycling with rheumatics or those predisposed to tuberculosis.

A case of a distinguished physician of Rouen, who sustained a serious eventration through the *linea alba*, in consequence of a bicycle strain is related. Moderate bicycling is approved of under proper circumstances, but its general adoption and abuse are condemned.

But is bicycling really an exercise which jeopardizes health, is attended with danger to life, or may lead to functional or organic disease? The public very properly look up to the medical profession for information and guidance on this question, and the latter is bound to submit it.

Therefore we may say, at once, that the riding of the bicycle is an invigorating and wholesome exercise, within certain limits; and, on the contrary, that its general adoption, as its abuse, cannot be too harshly condemned. Except for athletes, or those thoroughly trained to handle it, it is worse than useless.

In our crowded thoroughfares they are an intolerable nuisance. For any other purpose than machines for exercise they are worthless.

If any imagine he can come a great distance from day to day on one, with a less expenditure of strength than on foot, he is mistaken. He cannot; nay, if used on rough roads, the rider is certain to sustain injury from it.

The position which one is forced to assume is unnatural, and cannot be maintained long, without calling into action an accessory set of muscles, which attain volume only at the expense that is indispensable for other important purposes.

In the males, the urethra and testicles are almost certain to suffer; the abdominal muscles are weakened and the joints of the ankles unduly strained.

The roller skate and the skating rink were all the rage in the near past, but roller skating was found a dangerous pastime, and soon met with its just condemnation.

The large-wheeled bicycle with the pneumatic tire is a most valuable invention, and will serve many useful purposes, but it needs an expert to govern it, and is not to be trifled with by the amature Bicycling, then, is an exhilarating, bracing exercise, and so is the equestrian feat of riding a horse bare-back, but to the average mortal who tries it soon comes to grief.

Book Notes.

LIPPINCOTT'S MAGAZINE FOR JULY, 1893. The complete novel in the July number of *Lippincott's* is "The Troublesome Lady," by Patience Stapleton, who is already well-known to our readers. It is a lively and interesting tale of ranch life in the West, and is fully illustrated.

The fifth in the series of Lippincott's Notable Stories, also illustrated, is "The Reprieve of Capitalist Clyve," by Owen Wister.

Other illustrated articles are "On the Way," by Julien Hawthorne, which deals with Washington as a starting-point whence to visit the exposition, and "Chicago Architecture," by Barr Ferree.

"Fanny Kemble at Lenox," by C. B Todd, gives an entertaining account of that famous lady's life in Berkshire in former years.

Morgan S. Edmunds describes "A Wild Night on the Amazon," and Giovanni P. Morosini tells "What the United States owes to Italy."

Gilbert Parker, the author of the novel in the June issue, supplies an account of "'The New Poetry,' and Mr. W. E. Henley." Edgar Fawcett discusses "Certain Points of Style in Writing," and Maurice Francis Egan gives "An Old-Fashioned View of Fiction." Robert Timsol and Frederic M. Bird set forth the relative advantages of "Point *vs.* Truth" and "Truth *vs.* Point." M. Crofton, in "Men of the Day," handles Alexander Dumas and Secretary Hoke Smith.

The poetry of the number is by Mary Isabella Forsyth, Clifford Lanier, Flavel Scott Mines and Lloyd Mifflin.

NOTE.—*Lippincott's* and THE TIMES AND REGISTER for one year, $5.00.

The Medical Digest.

AN IDEAL SANITARIUM FOR ALCOHOLICS.—If I were to suggest an ideal means of dealing with inebriates, it would be the establishment of a little world in which alcohol had no place, but in which life with its various occupations, domestic arrangements, and amusements went on exactly the same. It would in fact be a colonization scheme, such as has proved so valuable in the case of epileptics and of the insane, only much more extensive and much more feasible. The problem involved is merely the exclusion of alcohol from all part in the colony's affairs. It is true that this could not be accomplished in any region open to ordinary traffic, travel, and communication; even a Chinese wall built around such a colony would not protect it from the invasion of its enemy; it would find some means to percolate through. But I can imagine some Temperance Island so far removed from the main land as not to be accessible to small boats, with only one harbor, five to ten or more miles in diameter, amenable to the laws of the United States, the property of a corporation of practical philanthropists, where all boats and baggage and merchandise would be thoroughly quarantined against the introduction of alcohol as if it were a comma bacillus, or the microbe of the Black Death. Here would be villages and industries, manufactures and arts, the commoners and the gentry, living in business prosperity and domestic happiness. Thither the drunkard would repair with his family, and obtaining a position, support himself and them, and lead a useful life as if such a thing as inebriety never existed. A majority of inebriates would immigrate there of their own accord, but certain ones would need commitment by law for three years. Such commitment, however, would be no hardship, for the rights of voting, of citizenship, the solace of society, the pleasure of following one's trade or calling, of earning a livelihood, and of living with one's family, would make existence not only tolerable but blessed. The realization of such a project is not an "iridescent dream." It is quite within the bounds of feasibility. A small additional tax upon spirits and spirit venders would be sufficient to acquire some Nantucket and consecrate it to this purpose. —Peterson, *Jour. A. M. A.*

PRESCRIPTIONS.

For Gall Stones:

℞. Ætheris . . . . . ℥vj
Olei terebinthinæ . . . . . ℥iv
Misce et fiat liquor.
Sig.—Ten to twenty drops in capsules, three times a day.

For Tuberculous Peritonitis:

℞. Extracti belladonnæ . . . . . ℥j
Unguenti hydrargyri . . . . . ℥j
Glycerini . . . . . ℥iv
Olei olivæ ad . . . . . ℥ij
Misce et fiat linimentum.
Sig.—To be applied twice daily to the abdomen.

For Diphtheria in an Adult:

℞. Quininæ sulphatis . . gr. ij
Liquoris hydrargyri perchloridi ♏ x
Tincturæ aurantii . . . . . ♏ x
Aquæ ad . . . . . ℥j
Misce et fiat mistura.
Sig.—Shake the bottle, and give two tablespoonfuls three times a day.

For Dilatation of the Stomach:

℞. Salol
Bismuthi salicylatis
Sodii bicarbonatis . . . aa gr. clv
Misce et divide in pulveres xxx.
Sig.—One to three powders to be taken before each meal.

For Chronic Bright's Disease with Failing Heart:

℞. Tincturæ digitalis . . . . . ♏ x
Liquoris Trinitrini . . . ♏ j ad ♏ ij
Aquæ chloroformi ad . . . . . ℥ss
Misce et fiat mistura.
Sig.—A tablespoonful three times a day.
—*Practitioner.*